

F	FCC ID:X4Y23062
This report concerns	(check one): ⊠Original Grant
Model Name : Applicant :	1409C131 Wireless-N 300Mbps router ARN02304U4 NEXXT SOLUTIONS 3505 N.W 107TH AVE MIAMI, FL, 33178
Date of Receipt : Date of Test : Issued Date : Tested by :	•
Testing Engineer	: David Mao (David Mao)
Technical Manager	:(Leo Hung)
Authorized Signatory	(Steven Lu)
No.3, Jinshagang 1	st Road, Shixia, Dalang Town, Dongguan, Guangdong, China. 318-3000 FAX: +86-769-8319-6000

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#### Declaration

**BTL** represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (**NML**) of **R.O.C**, or National Institute of Standards and Technology (**NIST**) of **U.S.A**.

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#### Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

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# **REPORT ISSUED HISTORY**

Issued No.	Description	Issued Date
BTL-FCCP-1- 1409C131	Original Issue.	Sep. 24, 2014



# **1. CERTIFICATION**

Equipment :	Wireless-N 300Mbps router
Brand Name :	NEXXT
Model Name:	ARN02304U4
Applicant :	NEXXT SOLUTIONS
Date of Test :	Sep. 15, 2014 ~ Sep. 23, 2014
Test Sample :	ENGINEERING SAMPLE
Standard(s) :	FCC Part15, Subpart C: 2013 (15.247) / ANSI C63.4-2009

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-1- 1409C131) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).

# 2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

# Applied Standard(s): FCC Part15 (15.247), Subpart C: 2013

Standard(s) Section FCC	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	
15.247(d)	Antenna conducted Spurious Emission	PASS	
15.247(a)(2)	6dB Bandwidth	PASS	
15.247(b)(3)	5.247(b)(3) Peak Output Power		
15.247(e)	47(e) Power Spectral Density		
15.203	Antenna Requirement	PASS	
15.209/15.205	Transmitter Radiated Emissions	PASS	

NOTE:

(1)" N/A" denotes test is not applicable in this test report.

(2) The test follows FCC KDB Publication No. 558074 D01 DTS Meas Guidance v03r02 (Measurement Guidelines of DTS)



#### 2.1 TEST FACILITY

The test facilities used to collect the test data in this report is **DG-C02/DG-CB03** at the location of No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.523792 BTL's test firm number for FCC: 319330

#### 2.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

The reported uncertainty of measurement y  $\pm\,$  U , where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of  $\,$  k=2 , providing a level of confidence of approximately 95 %  $^\circ$ 

#### A. Conducted Measurement :

Test Site	Method	Measurement Frequency Range	U , (dB)	NOTE
DG-C02	CISPR	150 KHz ~ 30MHz	3.40	

#### B. Radiated Measurement :

Test Site	Method	Measurement Frequency Range Ant. H / V U , (dB)		NOTE	
		9KHz~30MHz	V	3.79	
		9KHz~30MHz	Н	3.57	
		30MHz ~ 200MHz	V	3.82	
		30MHz ~ 200MHz	Н	3.60	
DG-CB03	CISPR	200MHz ~ 1,000MHz	V	3.86	
DG-CB03	CISER	200MHz ~ 1,000MHz	Н	3.94	
		1GHz~18GHz	V	3.12	
		1GHz~18GHz	Н	3.68	
		18GHz~40GHz	V	4.15	
		18GHz~40GHz	Н	4.14	

# **3. GENERAL INFORMATION**

# 3.1 GENERAL DESCRIPTION OF EUT

Equipment	Wireless-N 300Mbps router			
Brand Name	NEXXT			
Model Name	ARN02304U4			
Model Difference	N/A			
	Operation Frequency	2412~2462 MHz		
Product Description	Modulation Technology	802.11b:DSSS 802.11g:OFDM 802.11n:OFDM		
	Bit Rate of Transmitter	802.11b: 11/5.5/2/1 Mbps 802.11g: 54/48/36/24/18/12/9/6 Mbps 802.11n up to 300 Mbps		
	Output Power (Max.)	802.11b: 20.84 dBm 802.11g: 21.89 dBm 802.11n(20MHz): 23.98 dBm 802.11n(40MHz): 20.19 dBm		
Power Source	DC voltage supplied from	DC voltage supplied from AC adapter.		
Power Rating	I/P: AC 100-240V~ 50/60Hz 0.3A O/P: DC 9V 0.6A			

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.



# 2. Channel List:

CH01 – CH11 for 802.11b, 802.11g, 802.11n(20MHz) CH03 – CH09 for 802.11n(40MHz)							
Channel Frequency Channel Frequency (MHz) Channel Frequency (MHz) Channel (MHz) Channel (MHz) (MHz)					Frequency (MHz)		
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		

3. Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	Tenda	50000933	Dipole	N/A	4.94	TX/RX
2	<b>Tenda</b>	50000933	Dipole	N/A	4.94	TX/RX

Note:

(1) The EUT incorporates a MIMO function. Physically, the EUT provides two completed two transmitters and two receivers (2T2R), all transmit signals are completely uncorrelated, then, **Direction gain = G**<sub>ANT</sub>, that is Directional gain=4.94.

(2) ANT 1 was the worst case for 1TX.

4.

Operating Mode TX Mode	1TX	2TX
802.11b	V (ANT 1)	-
802.11g	V (ANT 1)	-
802.11n(20MHz)	-	V (ANT 1 + ANT 2)
802.11n(40MHz)	-	V (ANT 1 + ANT 2)

#### **3.2 DESCRIPTION OF TEST MODES**

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	TX B MODE CHANNEL 01/06/11
Mode 2	TX G MODE CHANNEL 01/06/11
Mode 3	TX N-20MHZ MODE CHANNEL 01/06/11
Mode 4	TX N-40MHZ MODE CHANNEL 03/06/09
Mode 5	TX MODE

The EUT system operated these modes were found to be the worst case during the pre-scanning test as following:

For Conducted Test	
Final Test Mode	Description
Mode 5	TX MODE

For Radiated Test		
Final Test Mode	Description	
Mode 1	TX B MODE CHANNEL 01/06/11	
Mode 2	TX G MODE CHANNEL 01/06/11	
Mode 3	TX N-20MHZ MODE CHANNEL 01/06/11	
Mode 4	TX N-40MHZ MODE CHANNEL 03/06/09	

Note:

(1) The measurements are performed at the high, middle, low available channels.

(2) 802.11b mode: DBPSK (1Mbps) 802.11g mode: OFDM (6Mbps) 802.11n HT20 mode : BPSK (13Mbps) 802.11n HT40 mode : BPSK (27Mbps) For radiated emission tests, the highest of

For radiated emission tests, the highest output powers were set for final test.

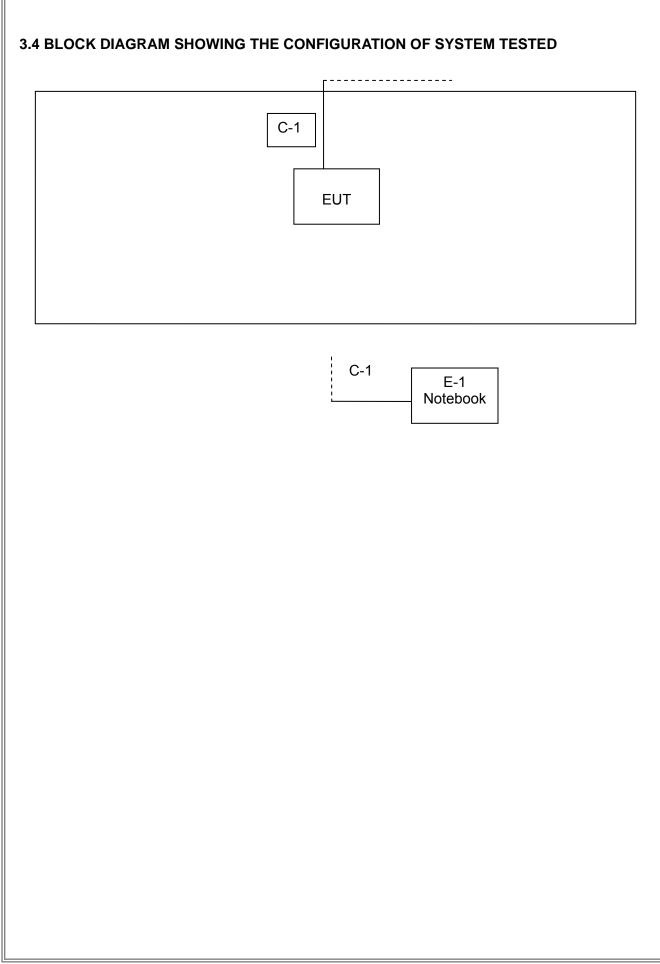
(3) For radiated below 1G test, the 802.11b is found to be the worst case and recorded.(4)The EUT was programmed to be in continuously transmitting mode and the transmit duty

cycle is not less than 98%.

#### 3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

During testing, channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of WLAN

Test software version		Mtool	
Frequency (MHz)	2412	2437	2462
802.11b	76	76	73
802.11g	56	56	54
802.11n (20MHz)	46	46	48
Frequency	2422	2437	2452
802.11n (40MHz)	38	38	42





#### **3.5 DESCRIPTION OF SUPPORT UNITS**

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID/IC	Series No.	Note
E-1	Notebook	DELL	INSPIRON 1420	DOC	N/A	

Item	Shielded Type	Ferrite Core	Length	Note
-	-	-	-	

# 4. EMC EMISSION TEST

#### 4.1 CONDUCTED EMISSION MEASUREMENT

## 4.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

Frequency of Emission (MHz)	Conducted Limit (dBµV)	
Frequency of Emission (MHz)	Quasi-peak	Average
0.15 -0.5	66 to 56*	56 to 46*
0.50 -5.0	56	46
5.0 -30.0	60	50

Note:

(1) The limit of " \* " decreases with the logarithm of the frequency

#### The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 KHz

#### 4.1.2 TEST PROCEDURE

a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.

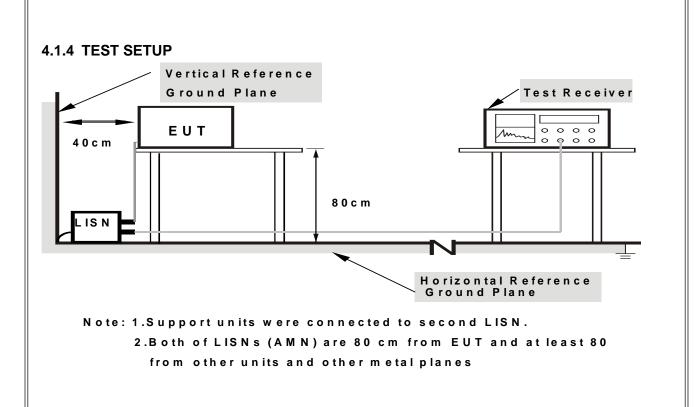
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

#### 4.1.3 DEVIATION FROM TEST STANDARD

No deviation





# 4.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

#### 4.1.6 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: AC 120V/60Hz

#### 4.1.7 TEST RESULTS

Please refer to the Attachment A.

#### 4.2 RADIATED EMISSION MEASUREMENT

#### 4.2.1 RADIATED EMISSION LIMITS

20dB in any 100 KHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a) & RSS-210 section 2.2& Annex 8 (A8.5), then the 15.209(a)& RSS-Gen limit in the table below has to be followed.

LIMITS OF RADIATED EMISSION MEASUREMENT (9KHz-1000MHz)

Frequency	Field Strength	Measurement Distance
(MHz)	(microvolts/meter)	(meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

Frequency (MHz)	(dBuV/m) (at 3 meters)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW	1MHz / 1MHz for Dook 1 MHz / 10Hz for Average
(Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9KHz~90KHz for PK/AVG detector
Start ~ Stop Frequency	90KHz~110KHz for QP detector
Start ~ Stop Frequency	110KHz~490KHz for PK/AVG detector
Start ~ Stop Frequency	490KHz~30MHz for QP detector
Start ~ Stop Frequency	30MHz~1000MHz for QP detector



# 4.2.2 TEST PROCEDURE

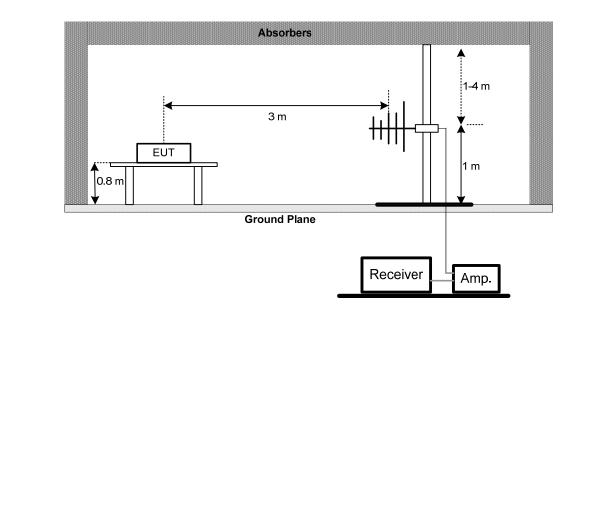
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item -EUT Test Photos.

#### 4.2.3 DEVIATION FROM TEST STANDARD

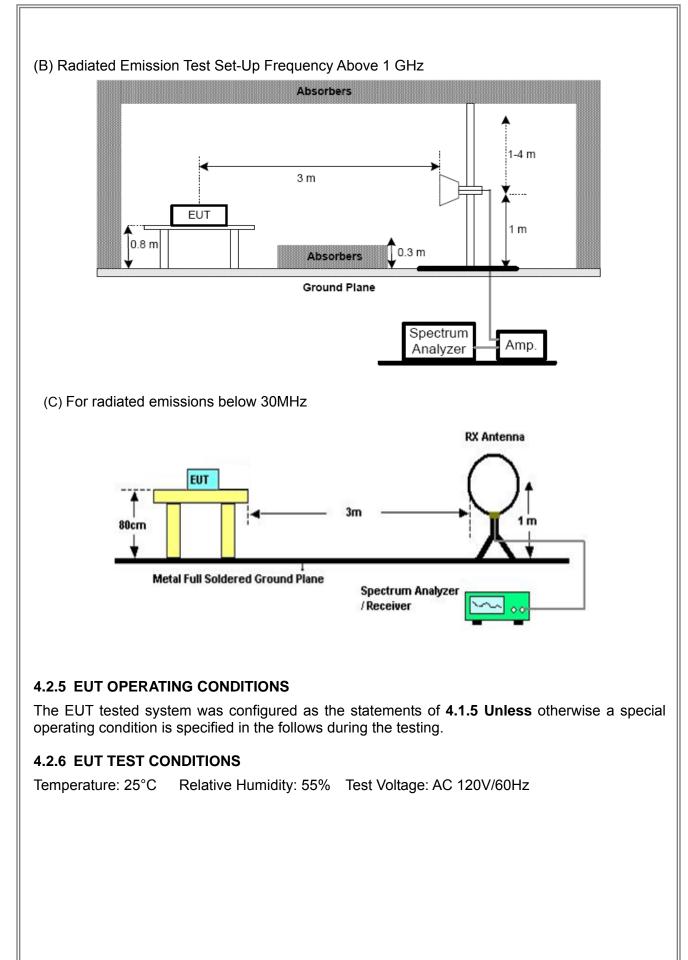
#### No deviation

#### 4.2.4 TEST SETUP

(A) Radiated Emission Test Set-Up Frequency Below 1 GHz









#### 4.2.7 TEST RESULTS (9KHZ TO 30MHZ)

Please refer to the Attachment B

Remark:

- (1) The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.
- (2) Distance extrapolation factor = 40 log (specific distance / test distance) (dB).
- (3) Limit line = specific limits (dBuV) + distance extrapolation factor.

#### 4.2.8 TEST RESULTS (BETWEEN 30MHZ TO 1000 MHZ)

Please refer to the Attachment C.

#### 4.2.9 TEST RESULTS (ABOVE 1000 MHZ)

Please refer to the Attachment D.



# 5. BANDWIDTH TEST

#### 5.1 Applied procedures

FCC Part15 (15.247) , Subpart C				
Section Test Item		Frequency Range (MHz)	Result	
15.247(a)(2)	Bandwidth	2400-2483.5	PASS	

#### 5.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=300KHz, Sweep time = 2.5 ms.

#### 5.1.2 DEVIATION FROM STANDARD

No deviation.

#### 5.1.3 TEST SETUP

EUT	SPECTRUM
	ANALYZER

#### 5.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 Unless otherwise a special operating condition is specified in the follows during the testing.

#### 5.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: AC 120V/60Hz

#### 5.1.6 TEST RESULTS

Please refer to the Attachment E.



# 6. MAXIMUM OUTPUT POWER TEST

#### 6.1 Applied procedures / limit

FCC Part15 (15.247), Subpart C						
Section	Test Item	Limit	Frequency Range (MHz)	Result		
15.247(b)(3)	Maximum Output Power	1 Watt or 30dBm	2400-2483.5	PASS		

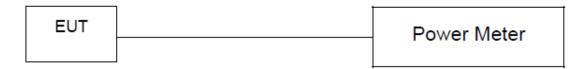
#### 6.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the power meter and antenna output port as show in the block diagram below,
- b. The maximum peak conducted output power was performed in accordance with method 9.1.3 of FCC KDB 558074 D01 DTS Meas Guidance v03r01.

#### 6.1.2 DEVIATION FROM STANDARD

No deviation.

#### 6.1.3 TEST SETUP



#### 6.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 Unless otherwise a special operating condition is specified in the follows during the testing.

Transmit output power was measured while the host equipment supply voltage was varied from 85 % to 115 % of the nominal rated supply voltage. No change in transmit output power was observed.

#### 6.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: AC 120V/60Hz

#### 6.1.6 TEST RESULTS

Please refer to the Attachment F.

# 7. ANTENNA CONDUCTED SPURIOUS EMISSION

## 7.1 Applied procedures / limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

#### 7.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=300KHz, Sweep time = Auto.

#### 7.1.2 DEVIATION FROM STANDARD

No deviation.

#### 7.1.3 TEST SETUP



#### 7.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 Unless otherwise a special operating condition is specified in the follows during the testing.

#### 7.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: AC 120V/60Hz

#### 7.1.6 TEST RESULTS

Please refer to the Attachment G.



# 8. POWER SPECTRAL DENSITY TEST

#### 8.1 Applied procedures / limit

FCC Part15 (15.247) , Subpart C						
Section	Test Item	Limit	Frequency Range (MHz)	Result		
15.247(e)	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS		

#### 8.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW=3KHz, VBW=10KHz, Sweep time = Auto.

#### 8.1.2 DEVIATION FROM STANDARD

No deviation.

#### 8.1.3 TEST SETUP

	1	
EUT		SPECTRUM
		ANALYZER

#### 8.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 Unless otherwise a special operating condition is specified in the follows during the testing.

#### 8.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: AC 120V/60Hz

#### 8.1.6 TEST RESULTS

Please refer to the Attachment H.

# 9. MEASUREMENT INSTRUMENTS LIST

	Conducted Emission Measurement								
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until				
1	LISN	EMCO	3816/2	00052765	Mar. 29, 2015				
2	LISN	R&S	ENV216	101447	Mar. 29, 2015				
3	Test Cable	N/A	C_17	N/A	Mar. 14, 2015				
4	EMI TEST RECEIVER	R&S	ESCS30	833364/017	Mar. 29, 2015				
5	50Ω Terminator	SHX	TF2-3G-A	08122902	Mar. 29, 2015				

	Radiated Emission Measurement							
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until			
1	Antenna	Schwarbeck	VULB9160	9160-3232	Mar. 29, 2015			
2	Amplifier	HP	8447D	2944A09673	Mar. 29, 2015			
3	Receiver	AGILENT	N9038A	MY52130039	Sep. 30, 2015			
4	Test Cable	N/A	C-01_CB03	N/A	Jul. 01, 2015			
5	Controller	СТ	SC100	N/A	N/A			
6	Antenna	ETS	3115	00075789	Mar. 29, 2015			
7	Amplifier	Agilent	8449B	3008A02274	Mar. 29, 2015			
8	Receiver	AGILENT	N9038A	MY52130039	Sep. 30, 2015			
9	Test Cable	HUBER+SUHNER	C-48	N/A	Apr. 30, 2015			
10	Controller	СТ	SC100	N/A	N/A			
11	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Feb. 22, 2015			
12	Active Loop Antenna	R&S	HFH2-Z2	830749/020	Mar. 29, 2015			



	6dB Bandwidth Measurement						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until		
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 11, 2014		

	Peak Output Power Measurement							
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until			
1	P-series Power meter	Agilent	N1911A	MY45100473	Mar. 29, 2015			
2	Wireband Power sensor	Agilent	N1921A	MY51100041	Mar. 29, 2015			

Antenna Conducted Spurious Emission Measurement						
ltem	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 11, 2014	

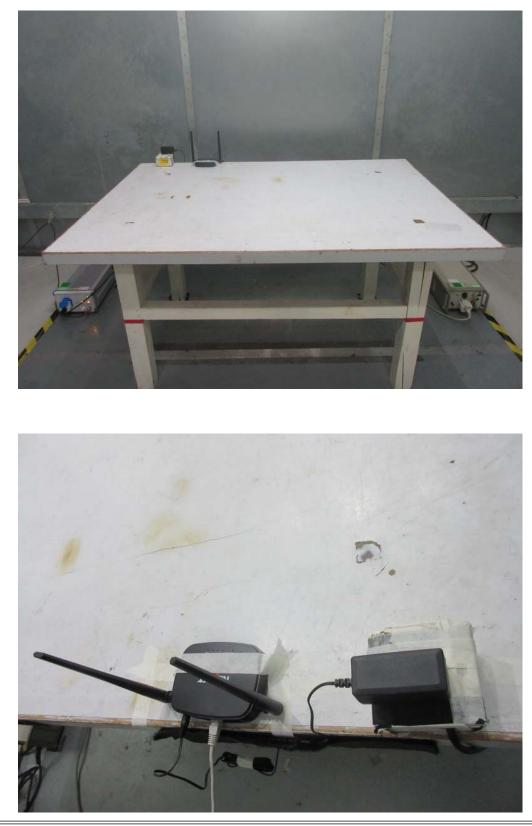
	Power Spectral Density Measurement						
Ite	em	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
	1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 11, 2014	

Remark: "N/A" denotes no model name, serial no. or calibration specified.

All calibration period of equipment list is one year.

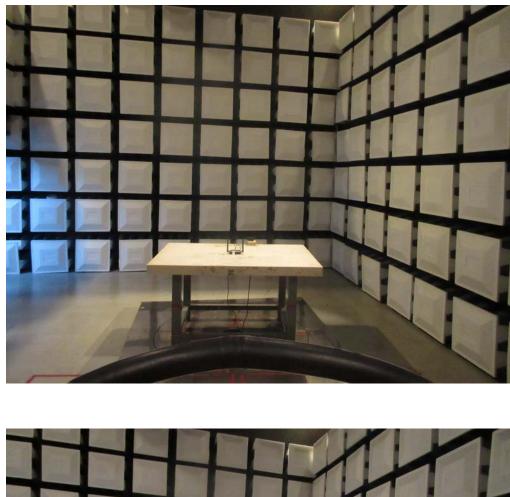
# **10. EUT TEST PHOTO**

**Conducted Measurement Photos** 



# **Radiated Measurement Photos**

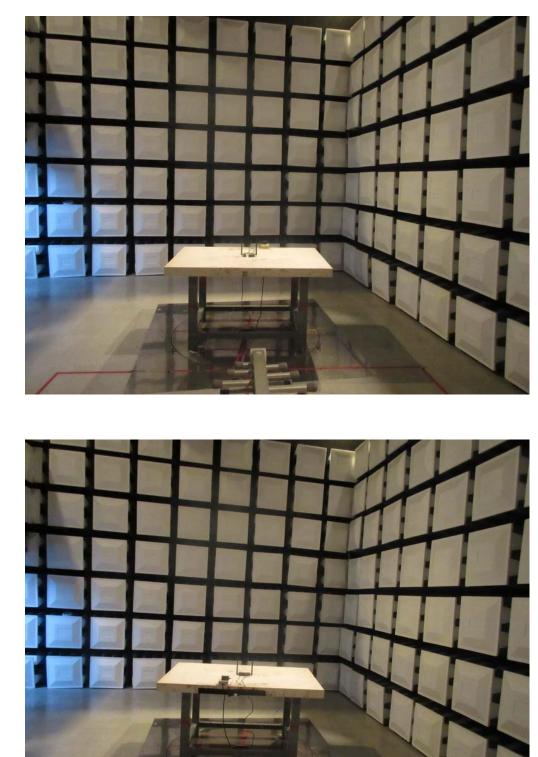
9KHz to 30MHz





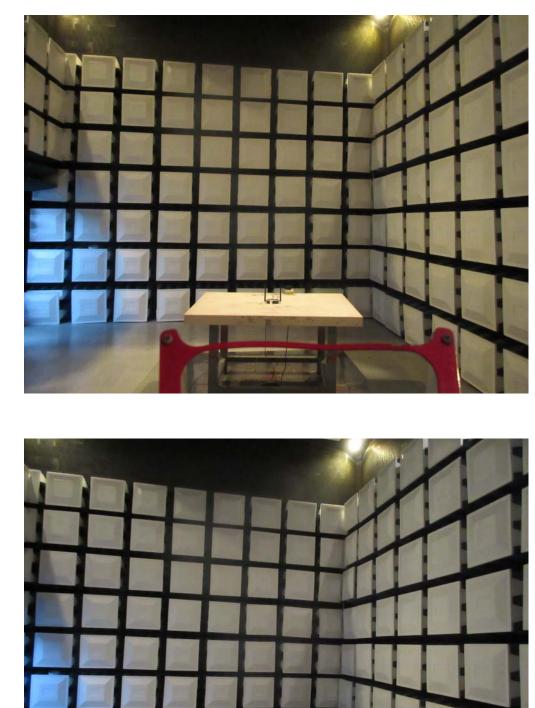
# **Radiated Measurement Photos**

30MHz to 1000MHz



# **Radiated Measurement Photos**

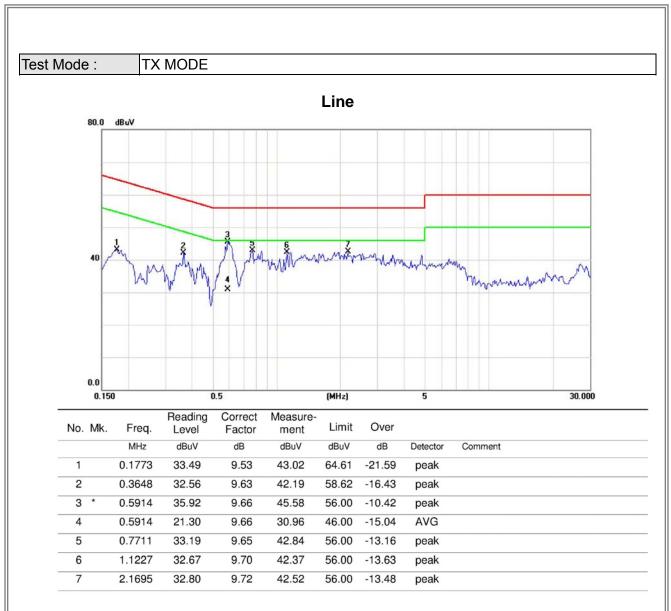
Above 1000MHz



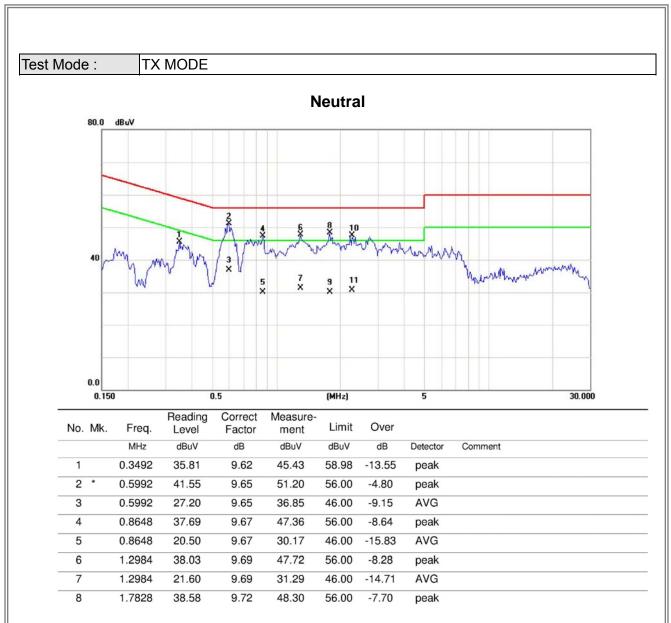
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# ATTACHMENT B - RADIATED EMISSION (9KHZ TO 30MHZ)

Test Mode:

TX Mode 2412MHz

Frequency (MHz)	Ant 0°/90°	Read level dBuV/m	Factor (dB)	Measured(FS) (dBuV/m)	Limit(QP) (dBuV/m)	Margin (dB)	Note
0.0096	<u> </u>	10.45	24.96	35.41	107.96	-72.55	AVG
0.0096	0°	12.31	24.96	37.27	127.96	-90.69	PEAK
0.0253	0°	14.85	23.96	38.81	99.54	-60.73	AVG
0.0253	0°	18.28	23.96	42.24	119.54	-77.30	PEAK
0.0416	0°	18.03	22.93	40.96	95.22	-54.26	AVG
0.0416	0°	22.76	22.93	45.69	115.22	-69.53	PEAK
0.0710	0°	21.97	21.98	43.95	90.58	-46.63	AVG
0.0710	0°	23.34	21.98	45.32	110.58	-65.26	PEAK
0.4915	0°	18.56	19.82	38.38	73.77	-35.39	QP
1.7158	0°	20.11	19.53	39.64	69.54	-29.90	QP

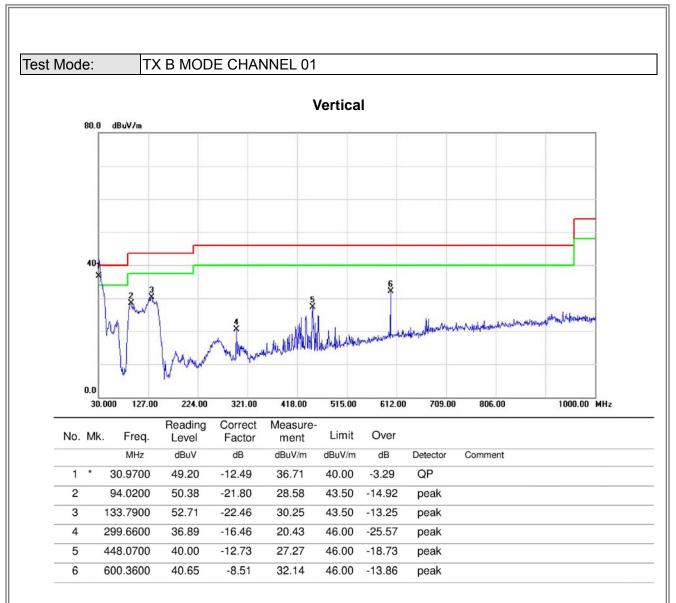
Frequency	Ant	Read level	Factor	Measured(FS)	Limit(QP)	Margin	Note
(MHz)	0°/90°	dBuV/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	note
0.0159	90°	12.36	24.30	36.66	123.58	-86.92	AVG
0.0159	90°	13.95	24.30	38.25	143.58	-105.33	PEAK
0.0257	90°	10.42	23.94	34.36	119.41	-85.05	AVG
0.0257	90°	23.74	23.94	47.68	139.41	-91.73	PEAK
0.0310	90°	17.60	23.60	41.20	117.78	-76.57	AVG
0.0310	90°	20.15	23.60	43.75	137.78	-94.02	PEAK
0.0428	90°	19.08	22.86	41.94	114.98	-73.04	AVG
0.0428	90°	23.61	22.86	46.47	134.98	-88.51	PEAK
0.4913	90°	24.57	19.82	44.39	73.78	-29.39	QP
1.7126	90°	18.68	19.53	38.21	69.54	-31.33	QP

Remark:

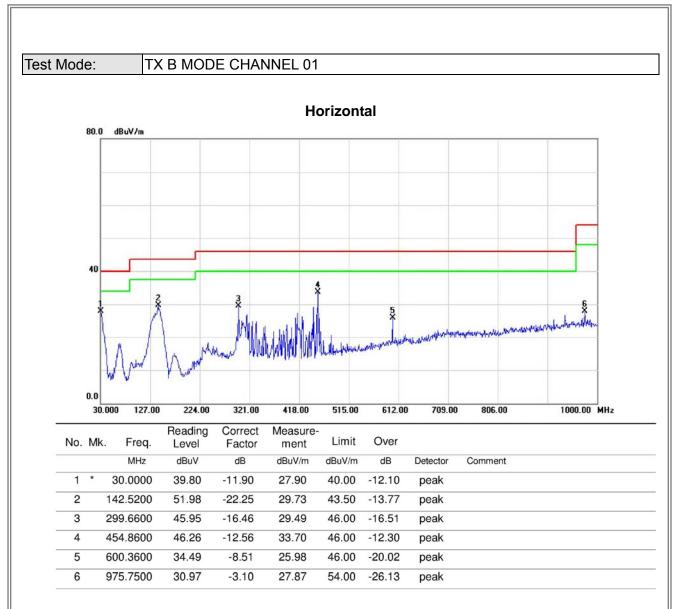
- (1) The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.
- (2) Distance extrapolation factor = 40 log (specific distance / test distance) (dB);
- (3) Limit line = specific limits (dBuV) + distance extrapolation factor.

# ATTACHMENT C - RADIATED EMISSION (30MHZ TO 1000MHZ)

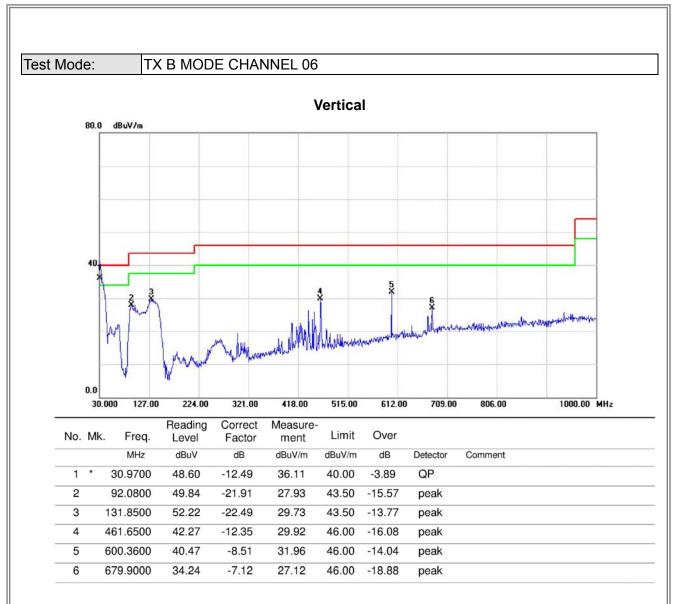




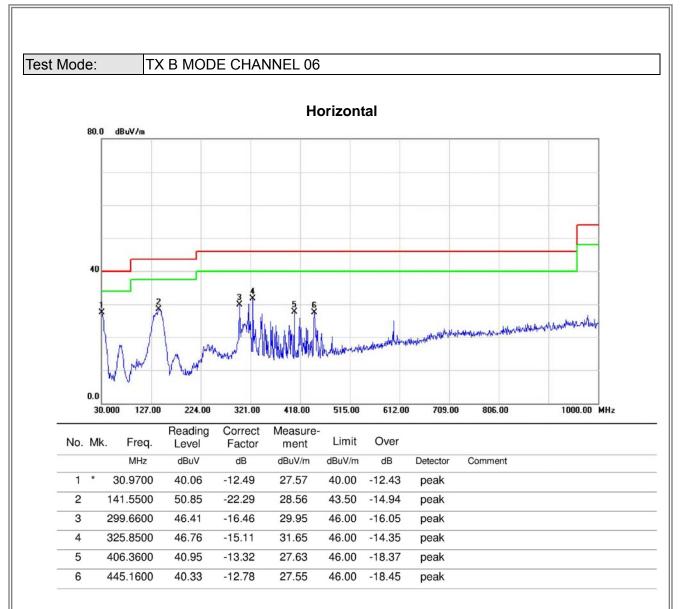




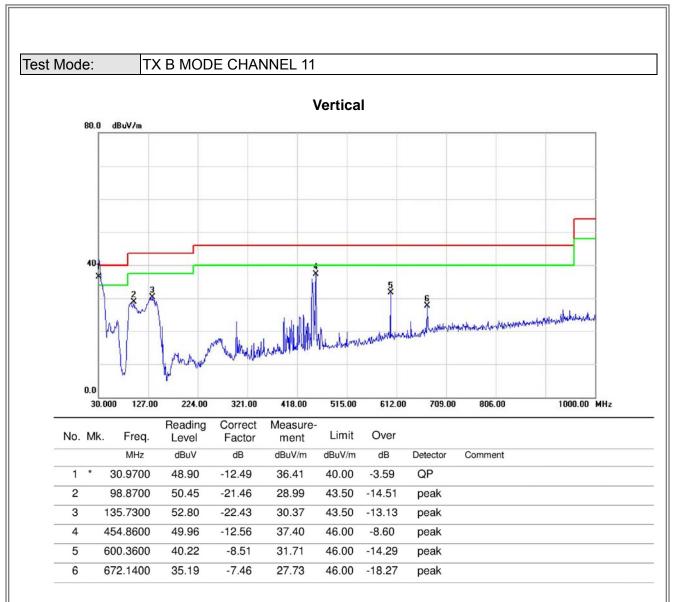




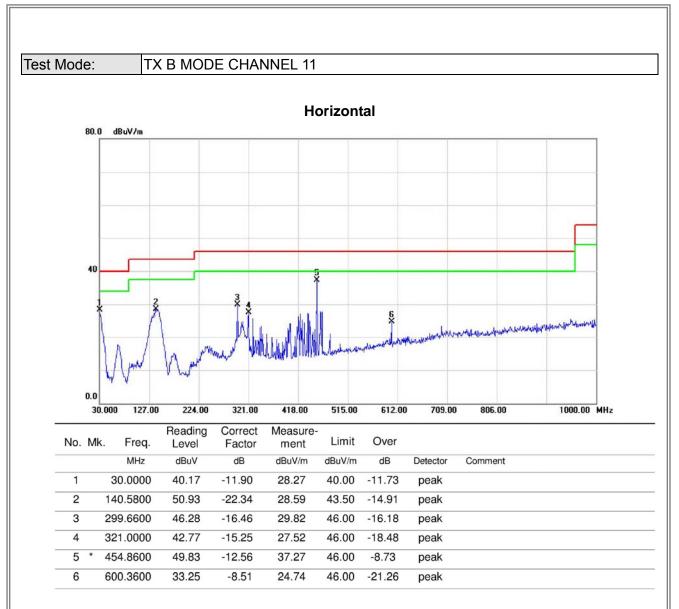






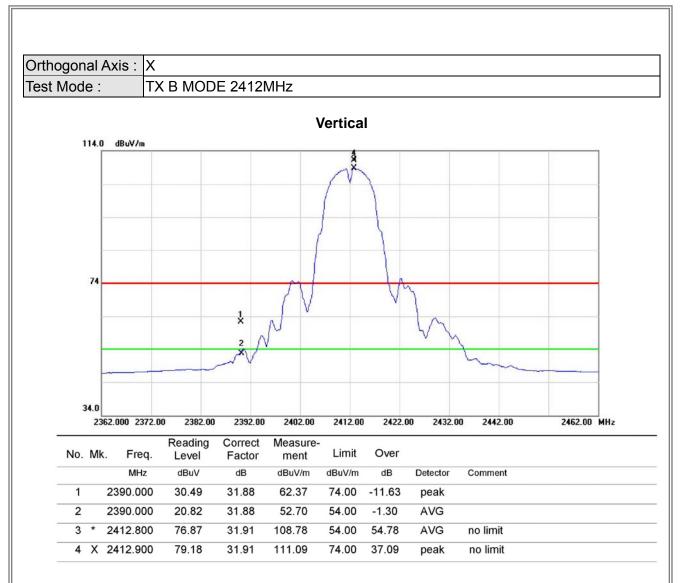




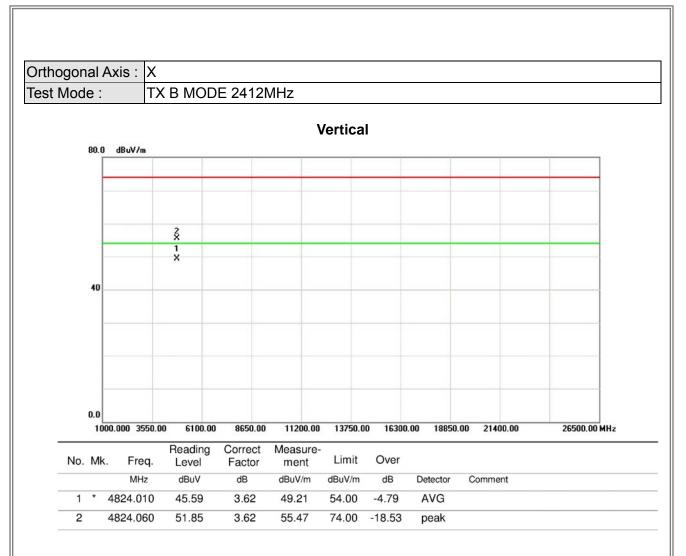


## ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)

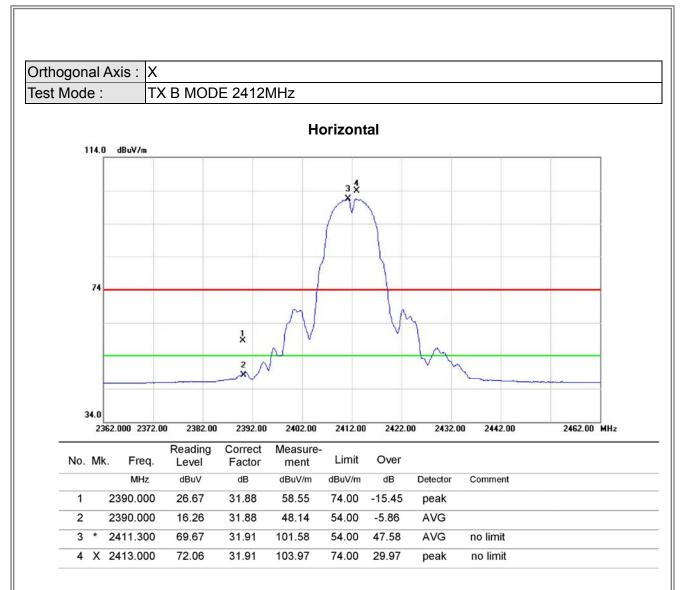




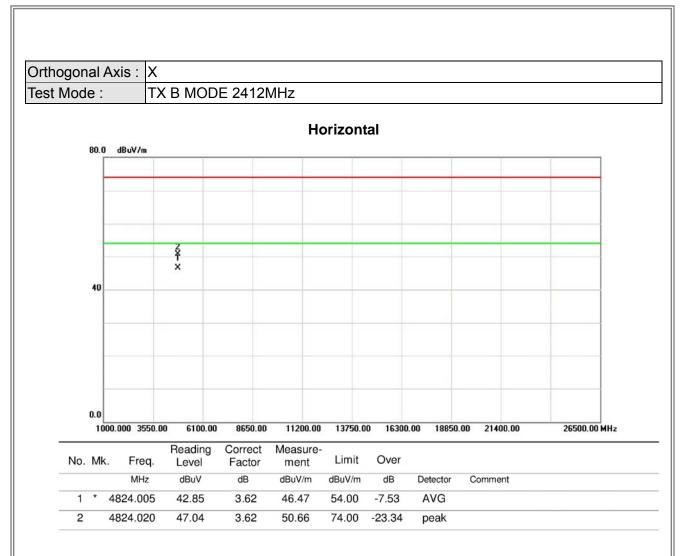




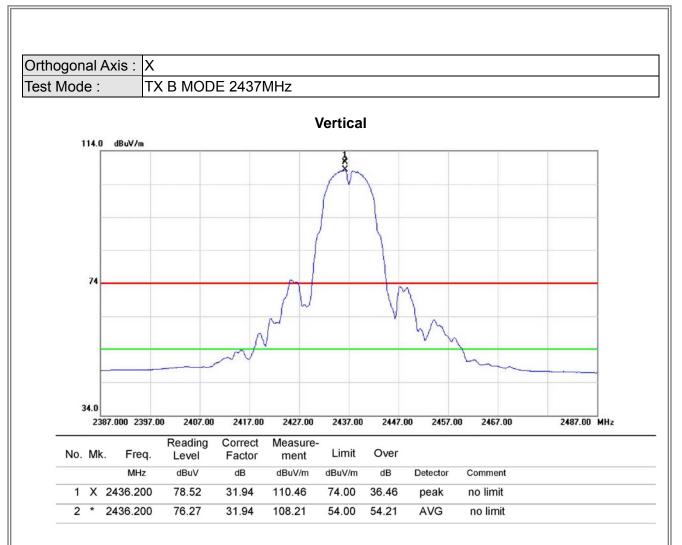




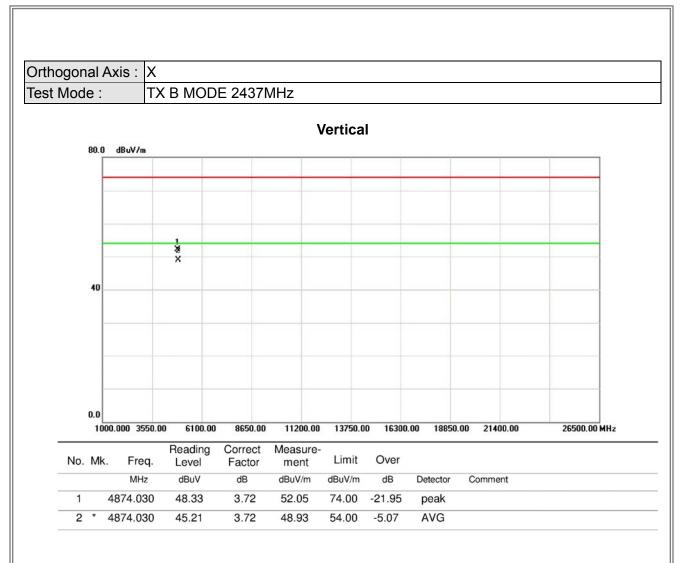




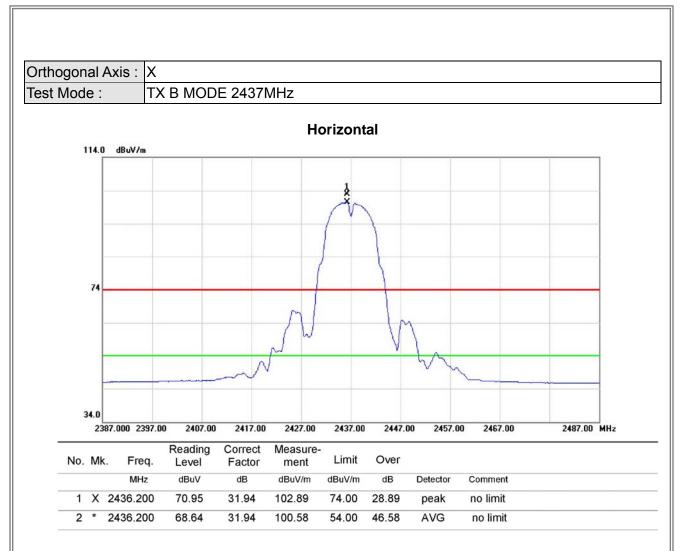








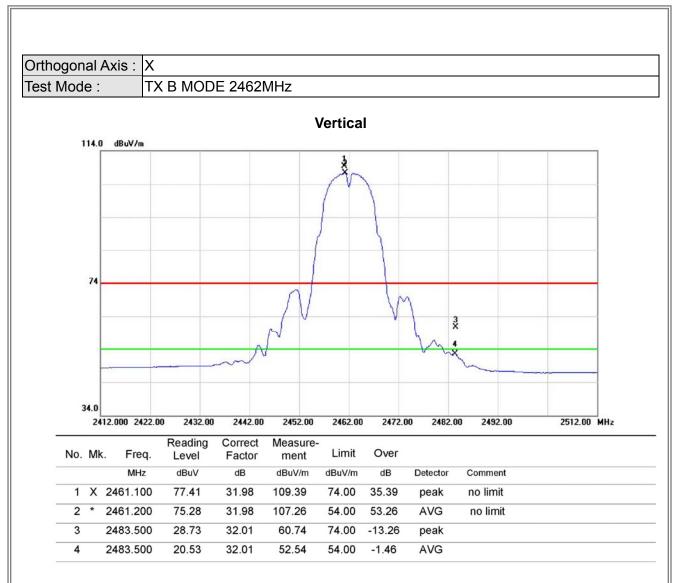




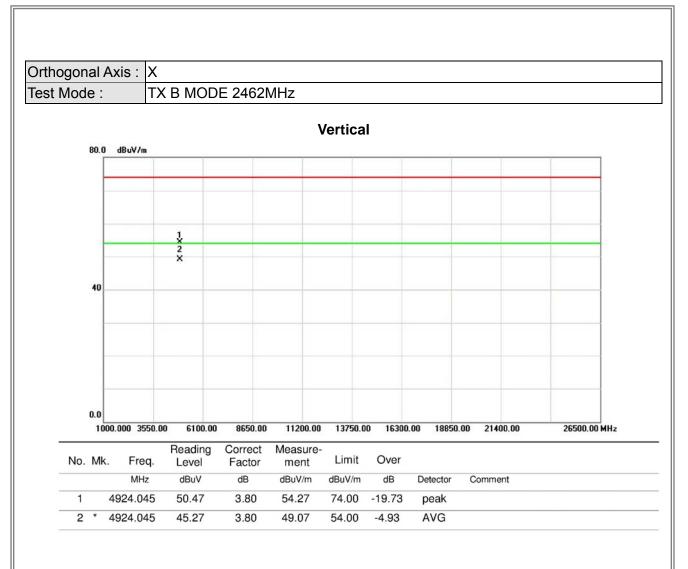




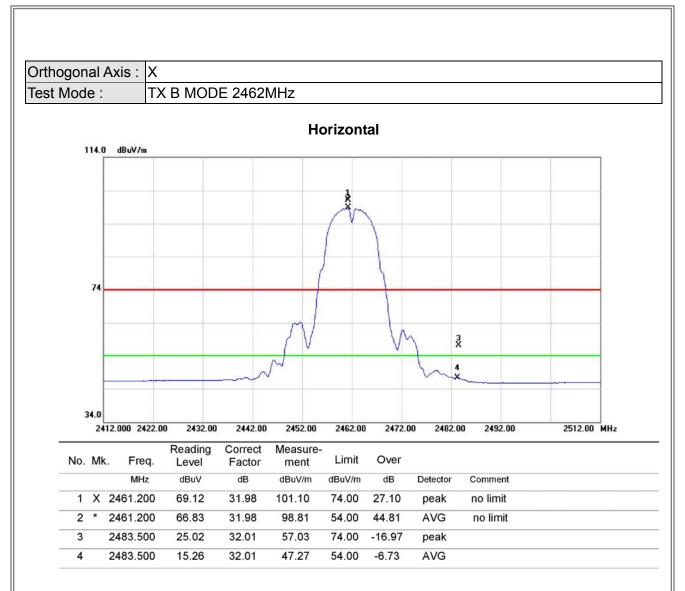




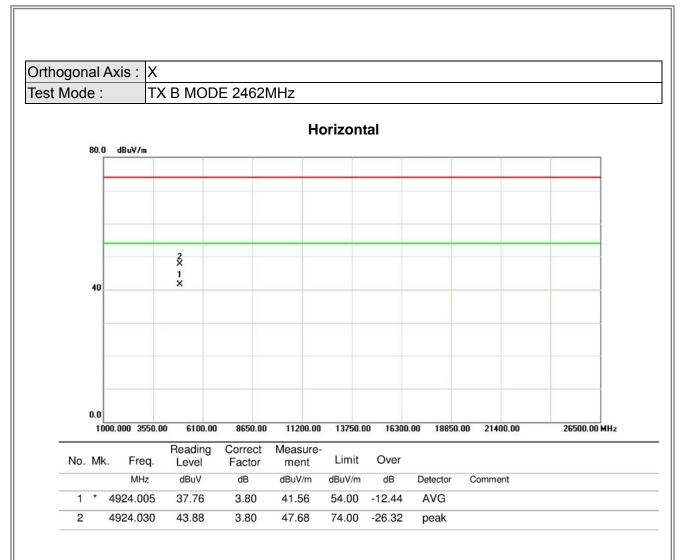




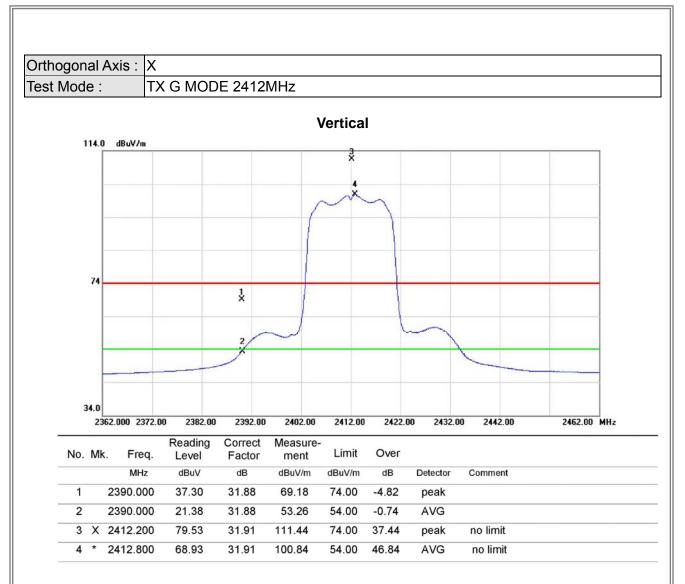




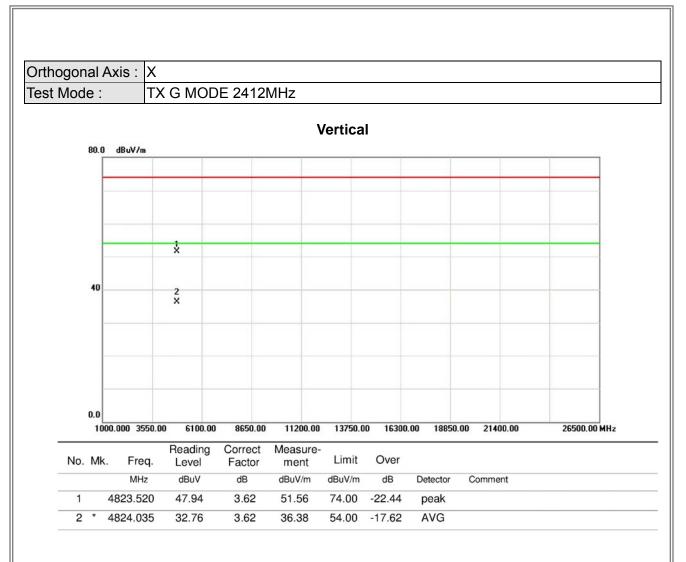




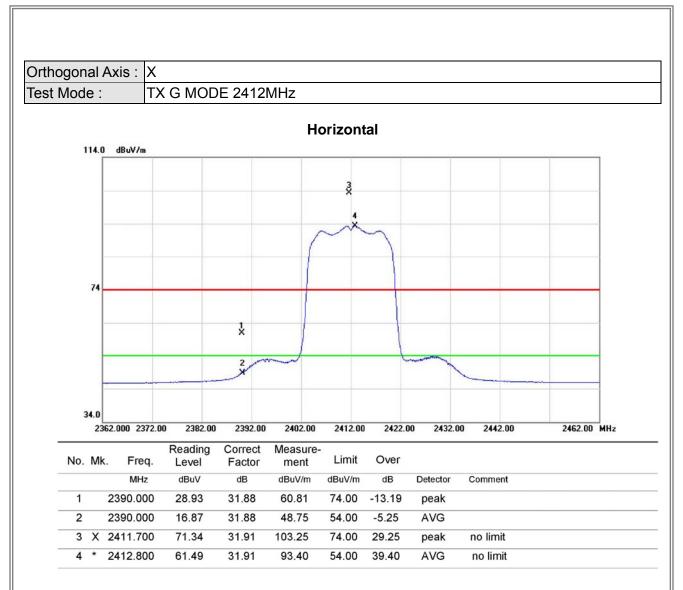








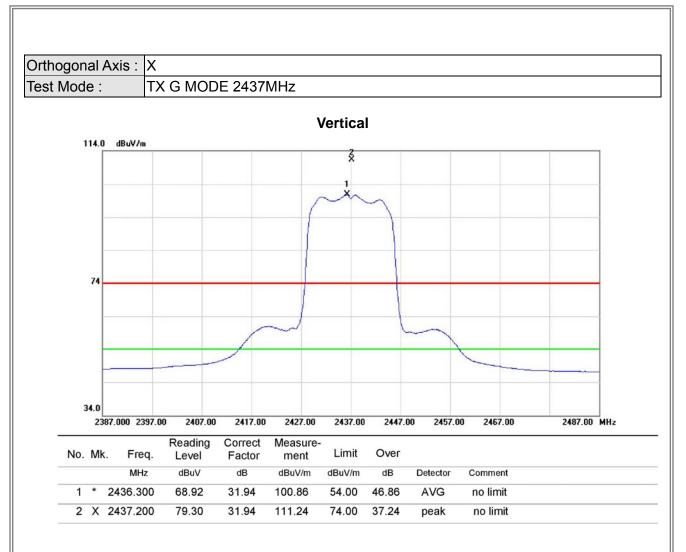




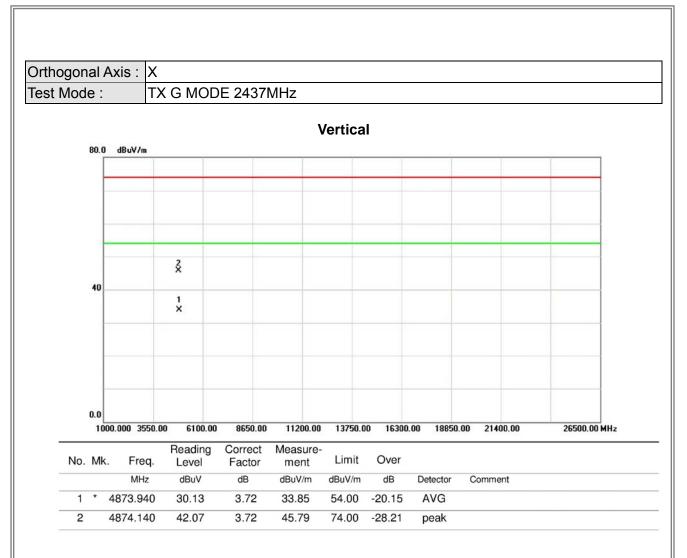




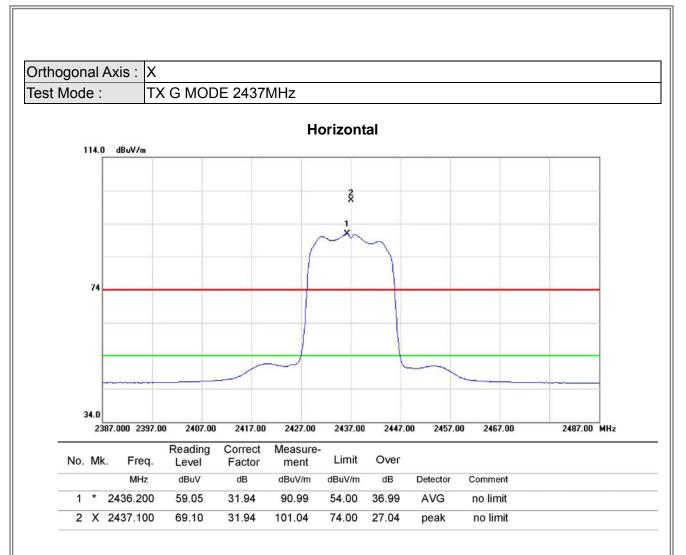




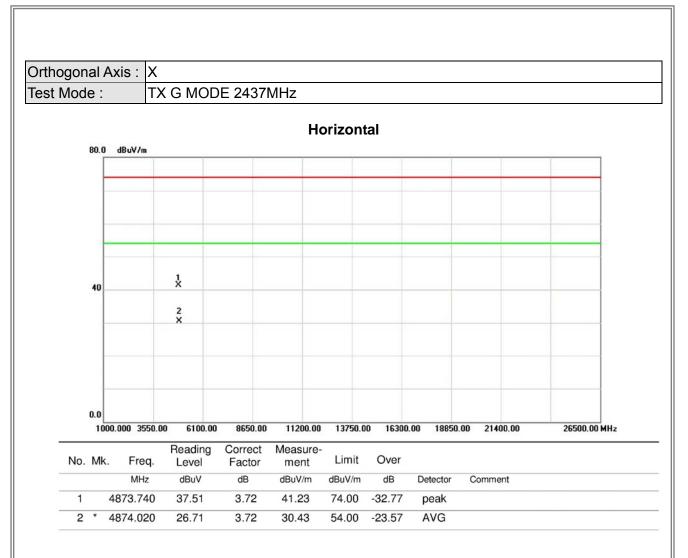




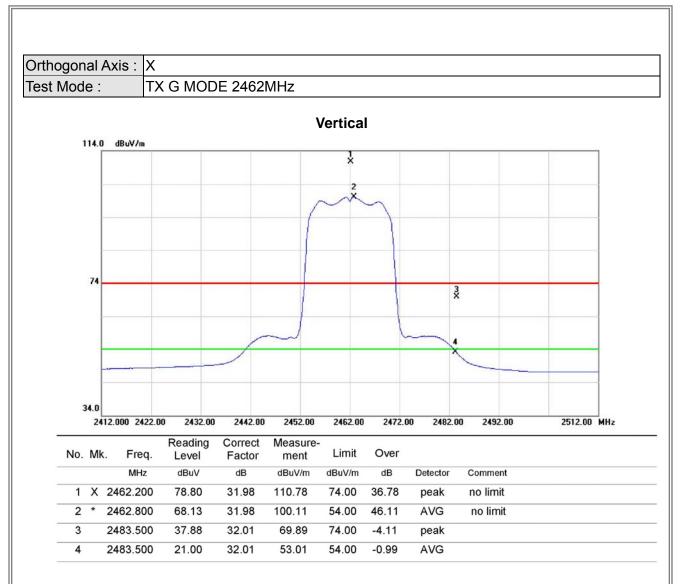




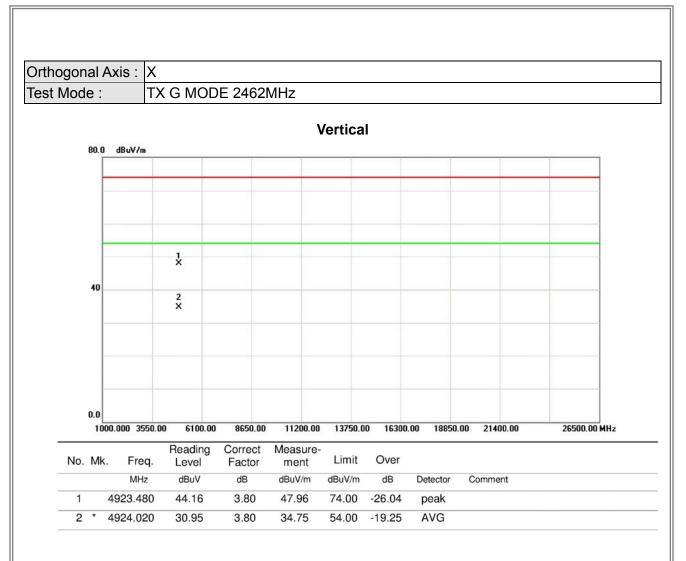




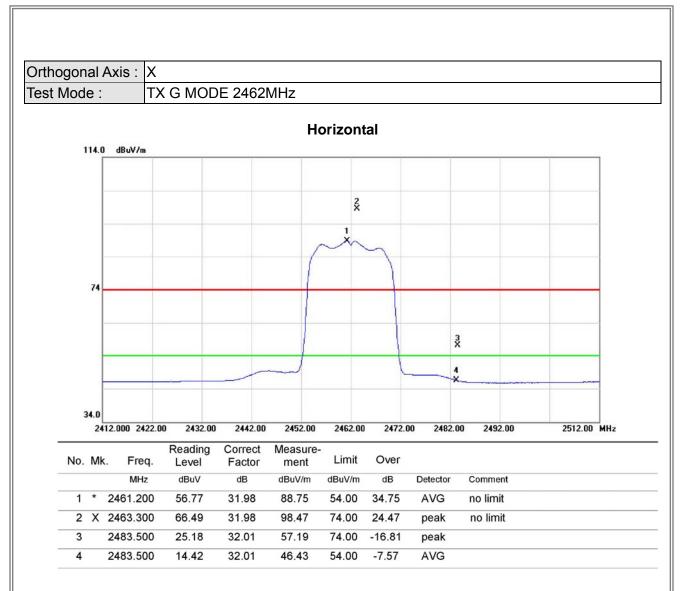








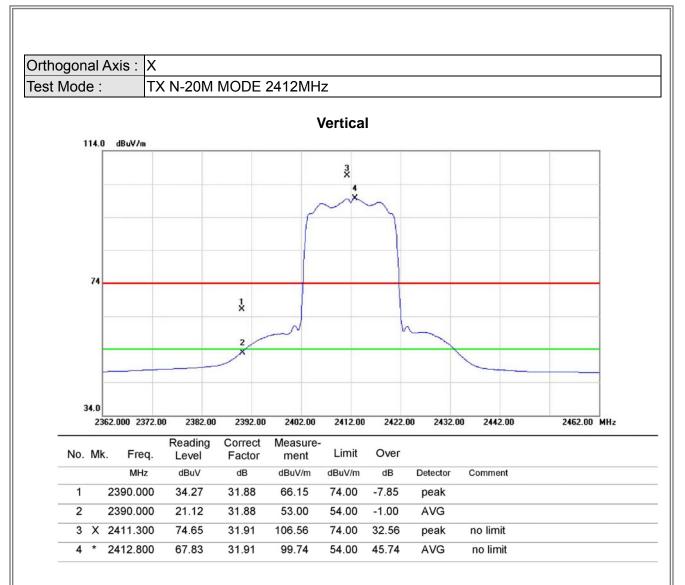




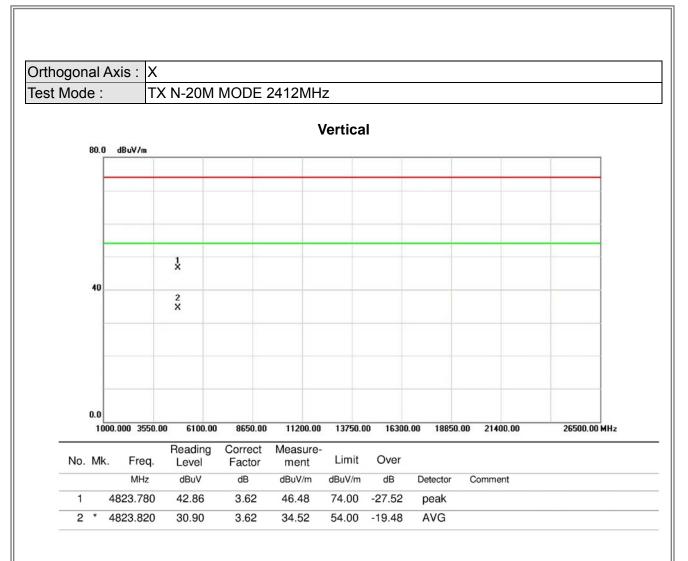




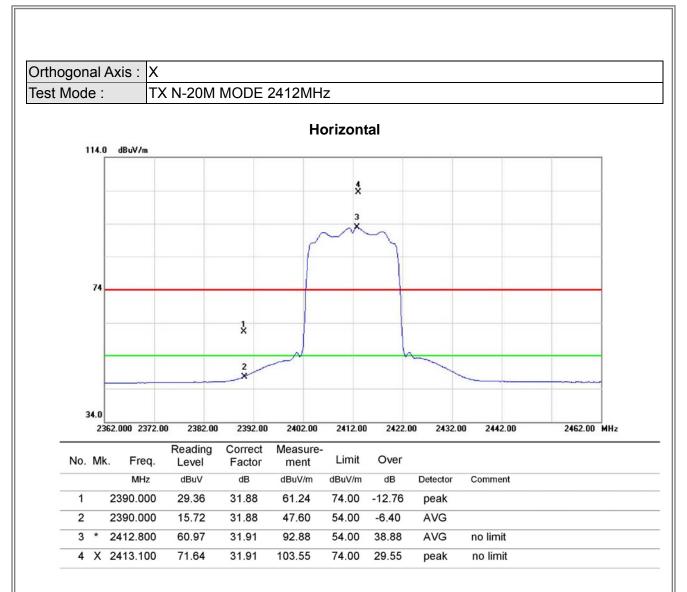








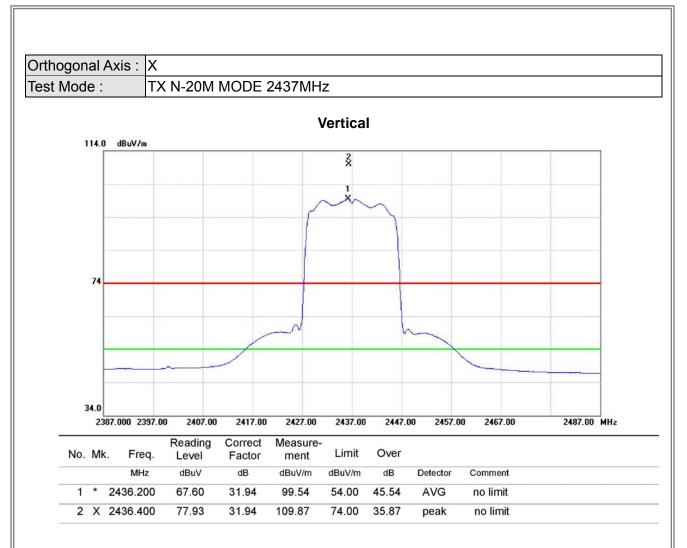




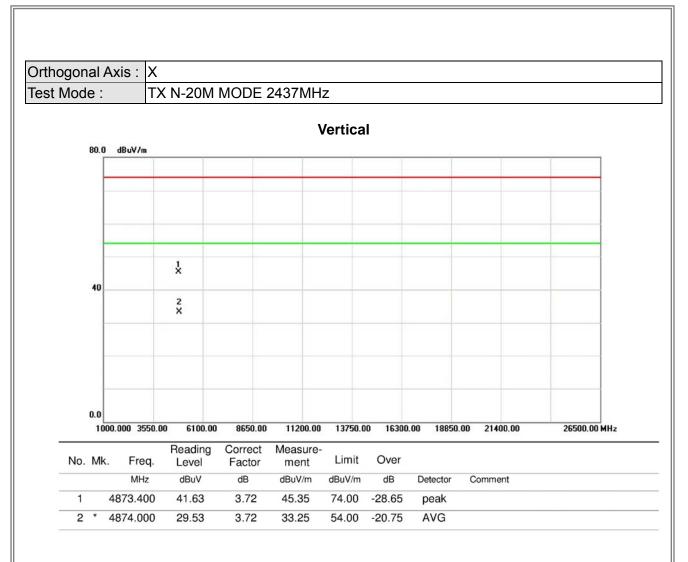




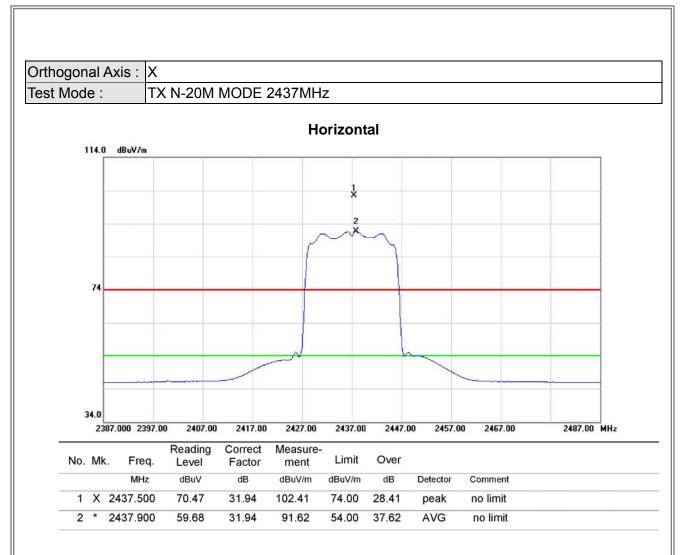




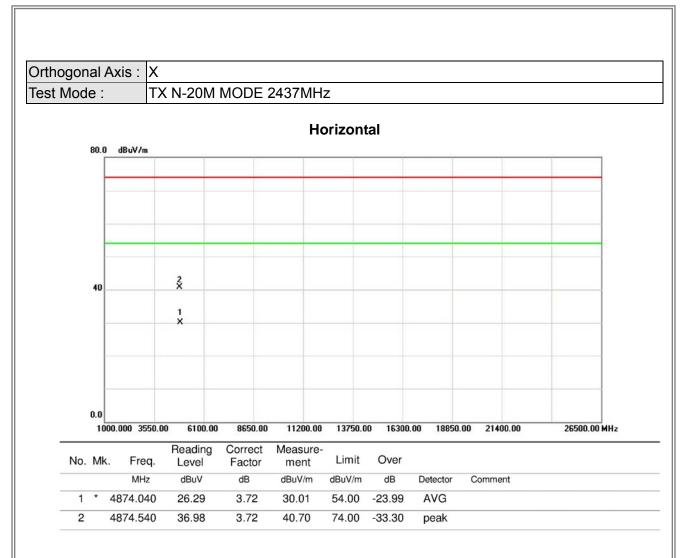




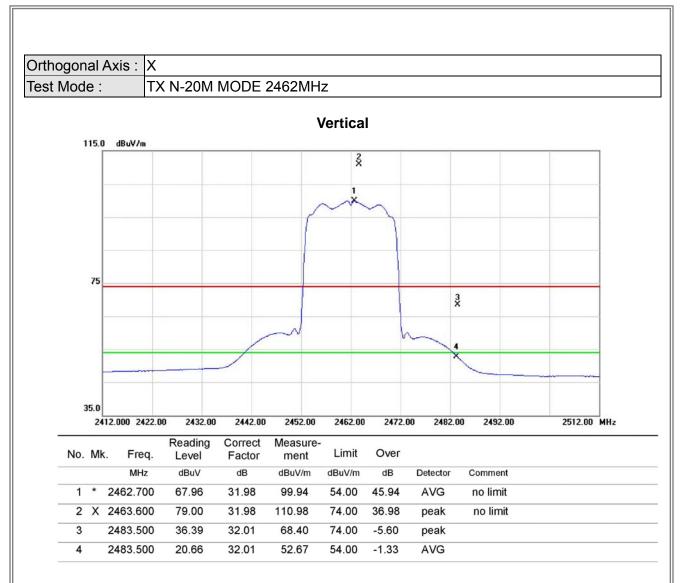




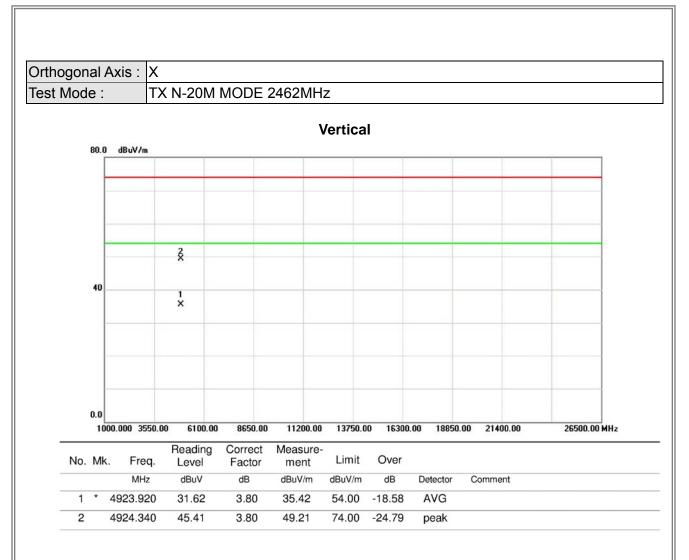




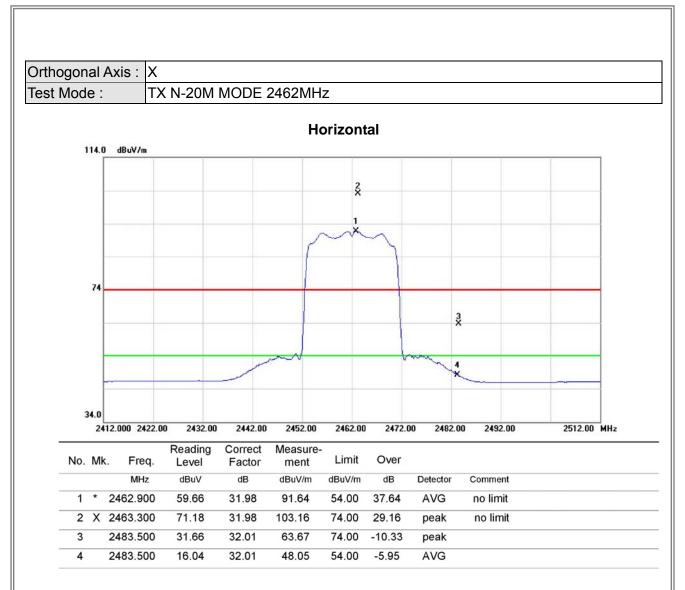








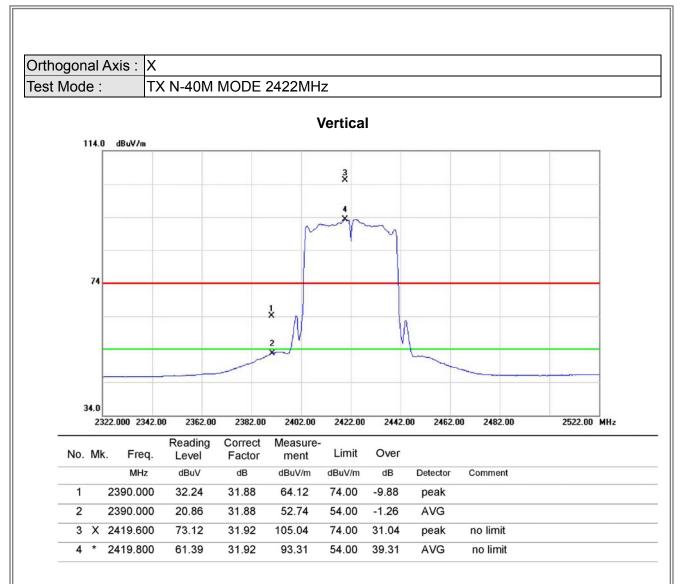




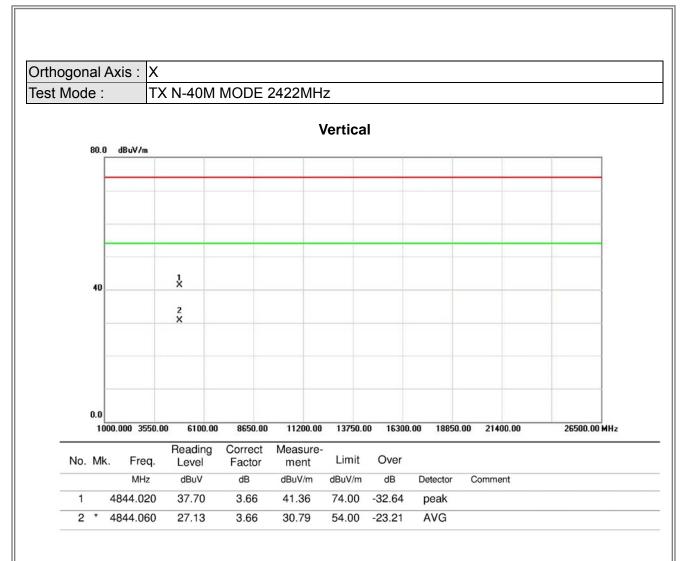




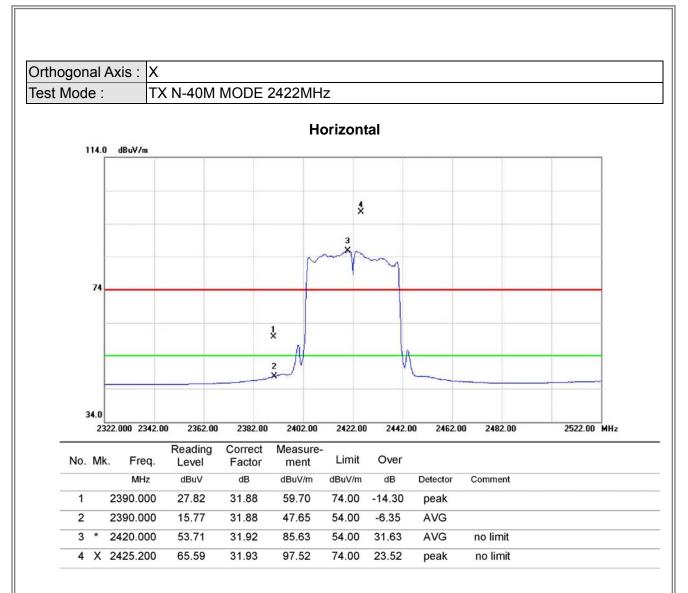




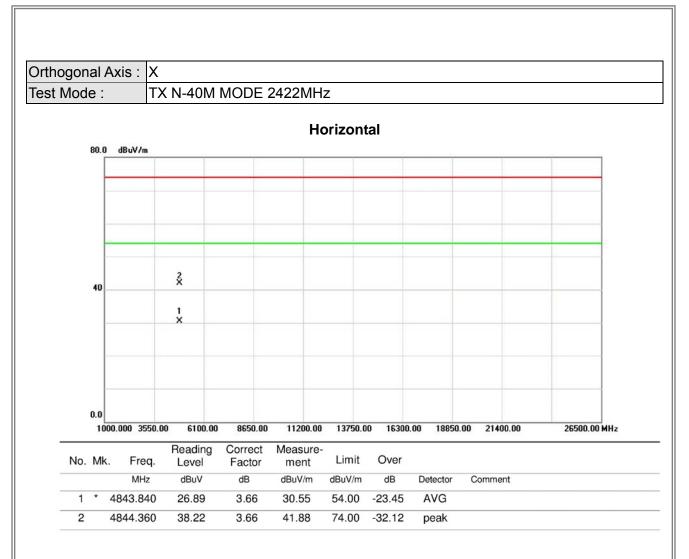




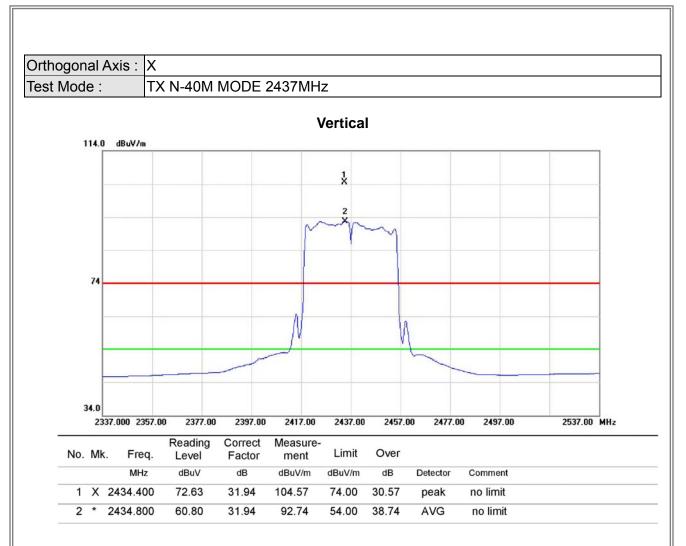




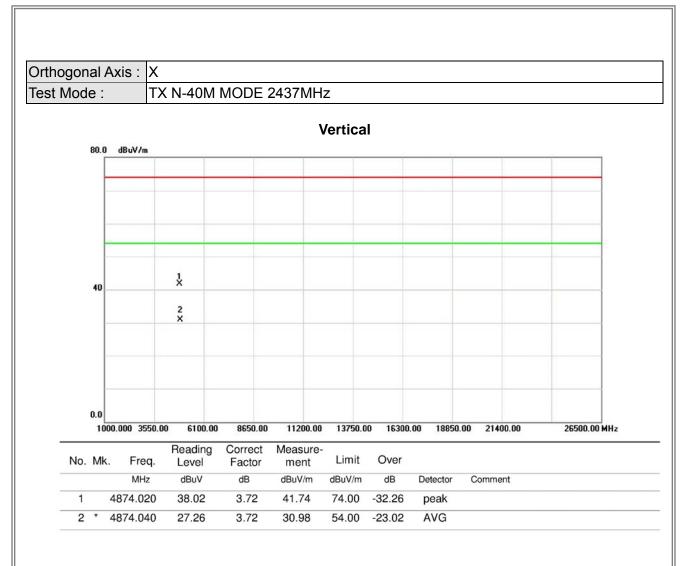




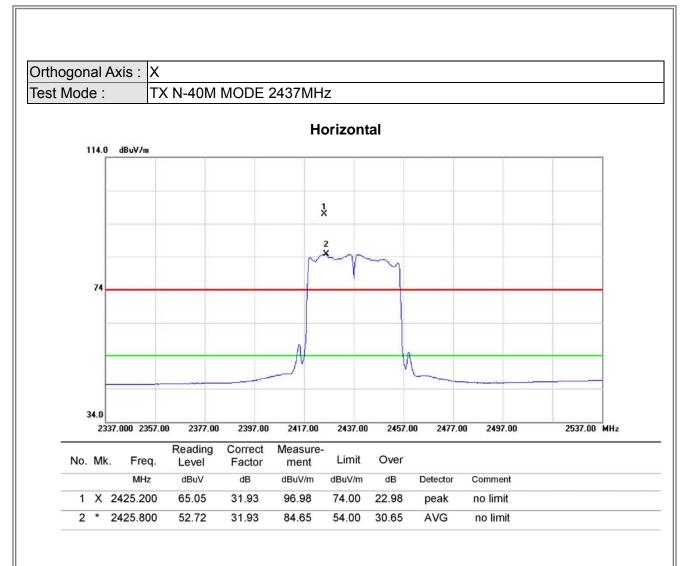




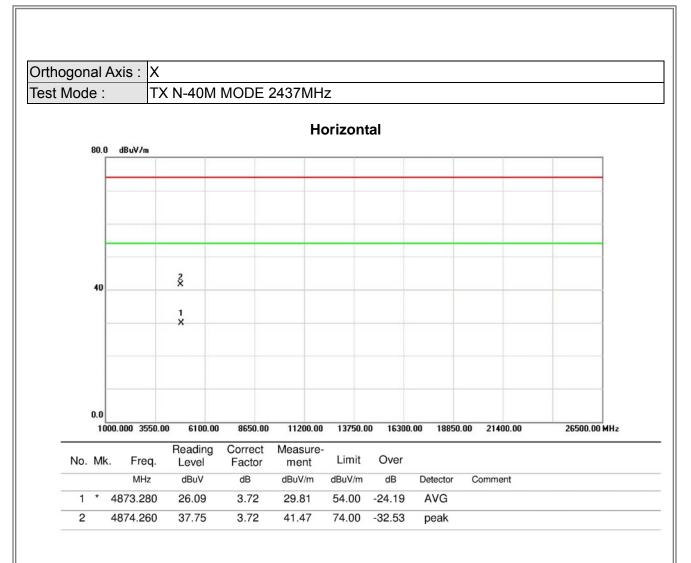




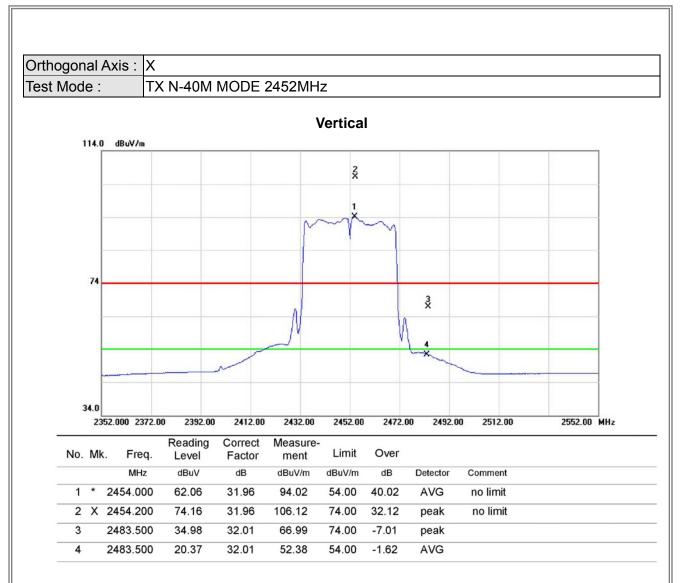




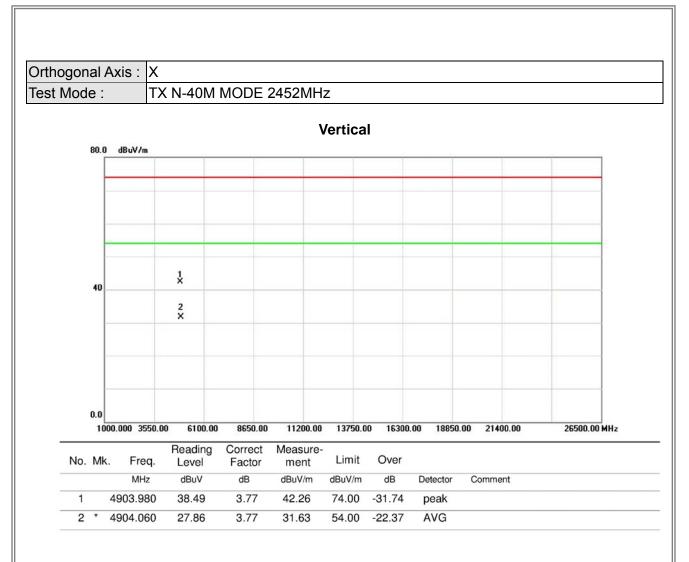




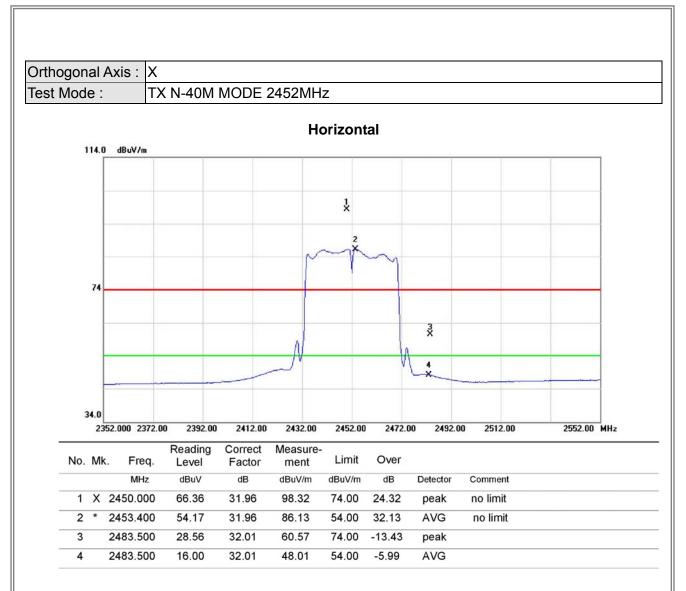




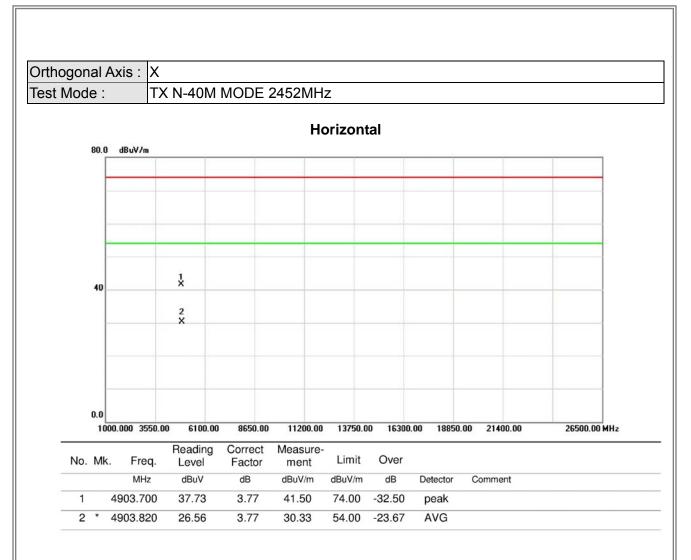










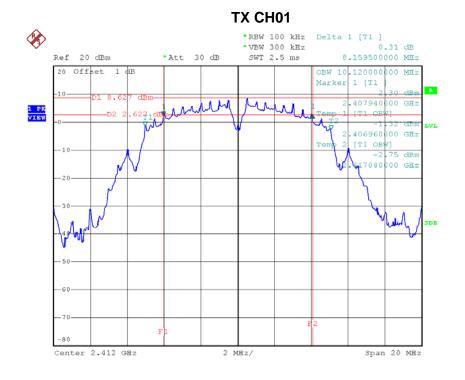




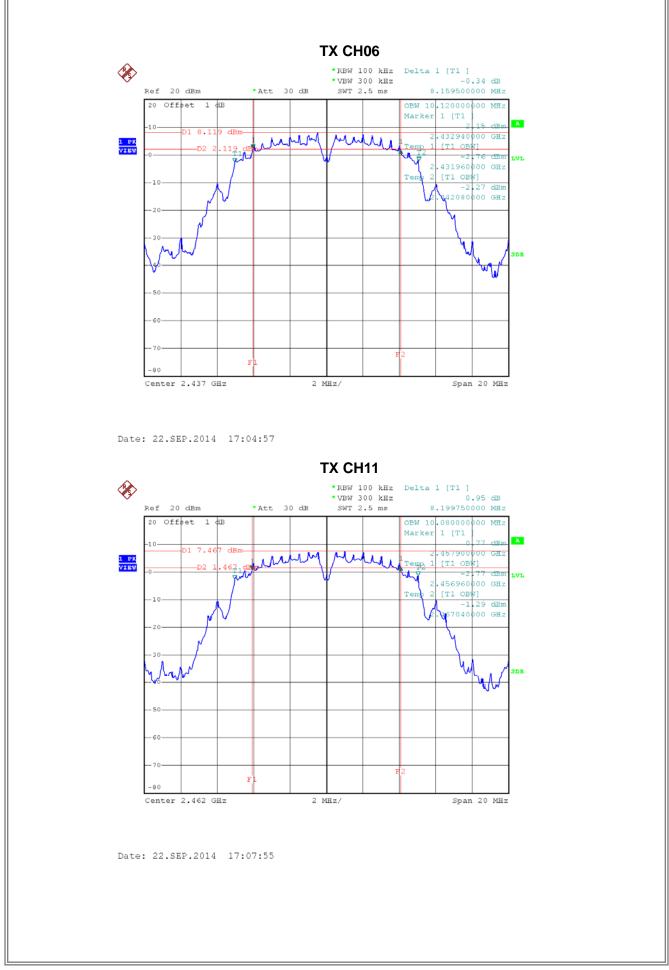
# ATTACHMENT E - BANDWIDTH

Test Mode : TX B Mode\_CH01/06/11

Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	8.16	10.12	500	Complies
2437	8.16	10.12	500	Complies
2462	8.20	10.08	500	Complies

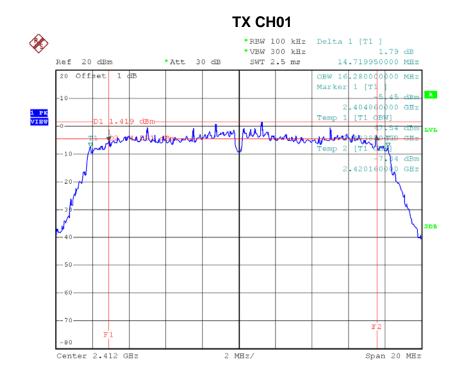


Date: 22.SEP.2014 17:01:24

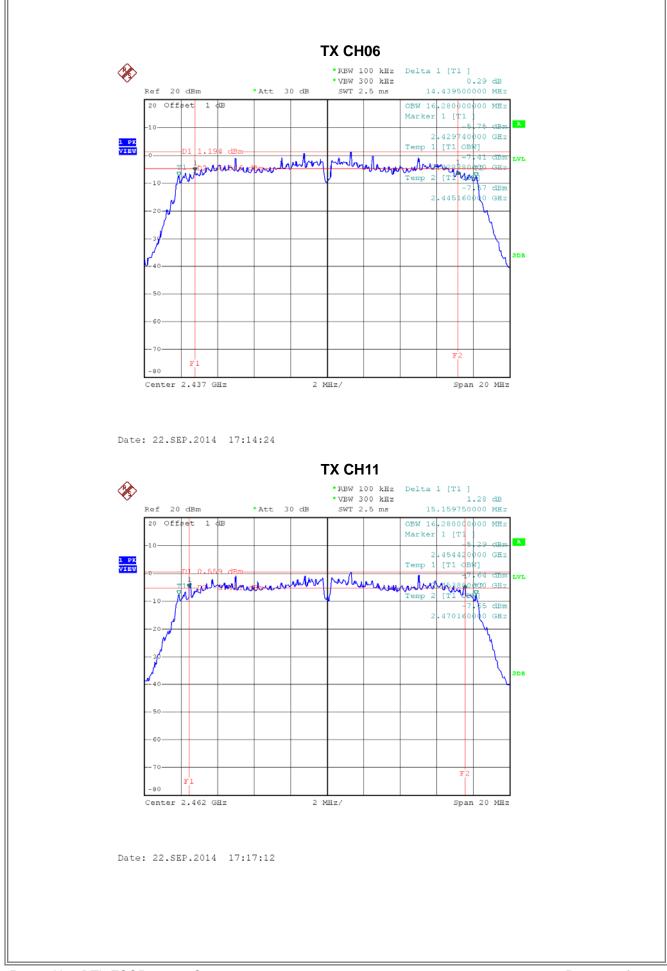


Test Mode: TX G Mode\_CH01/06/11

Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	14.72	16.28	500	Complies
2437	14.44	16.28	500	Complies
2462	15.16	16.28	500	Complies

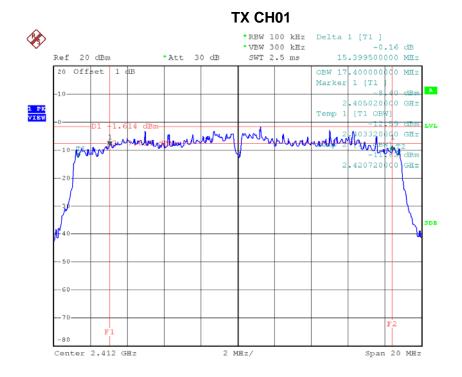


Date: 22.SEP.2014 17:11:38

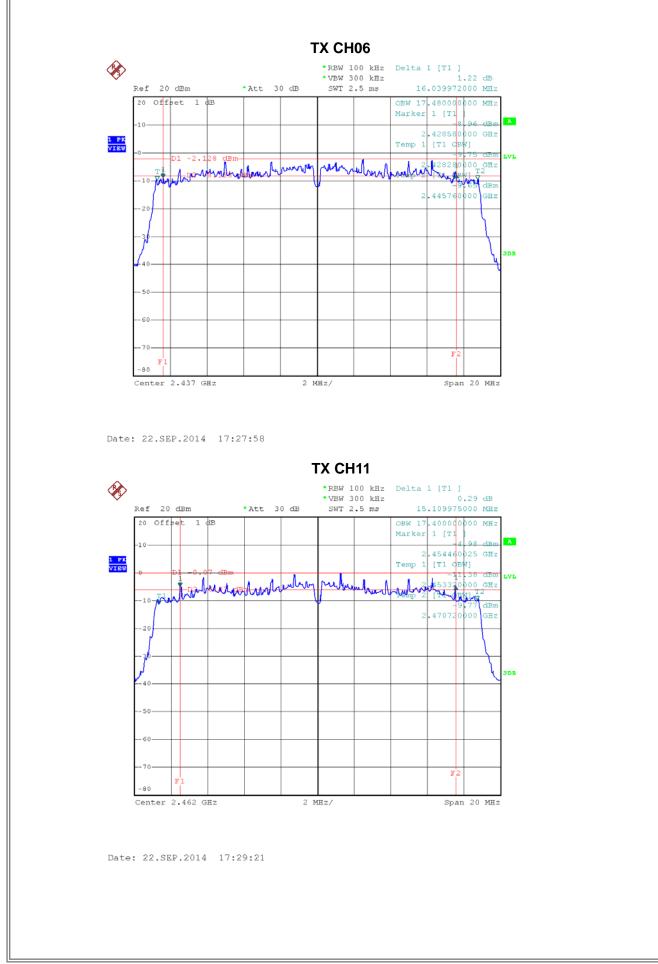


Test Mode : TX N-20MHz M	lode_CH01/06/11
--------------------------	-----------------

Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	15.40	17.40	500	Complies
2437	16.04	17.48	500	Complies
2462	15.11	17.40	500	Complies

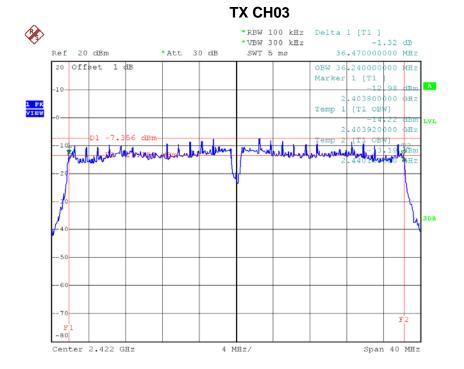


Date: 22.SEP.2014 17:24:57

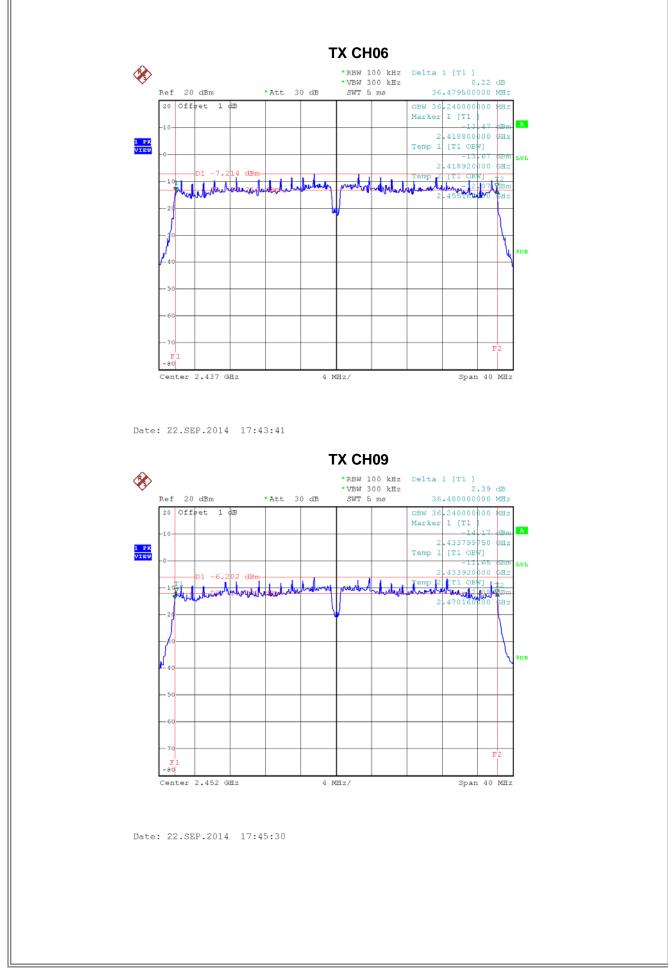


Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result				
2422	36.47	36.24	500	Complies				
2437	36.48	36.24	500	Complies				
2452	36.48	36.24	500	Complies				

#### Test Mode : TX N-40MHz Mode\_CH03/06/09



Date: 22.SEP.2014 17:41:54





Test Mode :TX B Mode_CH01/06/11_ANT 1						
					·	
Frequency	Conducted Power	Conducted Power	Max. Limit	Max. Limit	Result	
(MHz)	(dBm)	(W)	(dBm)	(W)	Result	
2412	20.84	0.12	30.00	1.00	Complies	
2437	19.55	0.09	30.00	1.00	Complies	
2462	17.98	0.06	30.00	1.00	Complies	

### Test Mode :TX G Mode\_CH01/06/11\_ANT 1

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	21.89	0.15	30.00	1.00	Complies
2437	21.05	0.13	30.00	1.00	Complies
2462	20.23	0.11	30.00	1.00	Complies

#### Test Mode :TX N20 Mode\_CH01/06/11\_ANT 1

	Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
ſ	2412	21.06	0.13	30.00	1.00	Complies
	2437	19.99	0.10	30.00	1.00	Complies
	2462	19.69	0.09	30.00	1.00	Complies

#### Test Mode :TX N20 Mode\_CH01/06/11\_ANT 2

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	20.88	0.12	30.00	1.00	Complies
2437	20.26	0.11	30.00	1.00	Complies
2462	18.92	0.08	30.00	1.00	Complies

### Test Mode :TX N20 Mode\_CH01/06/11\_Total

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2412	23.98	0.25	30.00	1.00	Complies
2437	23.14	0.21	30.00	1.00	Complies
2462	22.33	0.17	30.00	1.00	Complies

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
2422	16.68	0.05	30.00	1.00	Complies
2437	16.38	0.04	30.00	1.00	Complies
2452	16.48	0.04	30.00	1.00	Complies

#### Test Mode :TX N40 Mode\_CH03/06/09\_ANT 2

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result	
2422	17.63	0.06	30.00	1.00	Complies	
2437	17.18	0.05	30.00	1.00	Complies	
2452	17.79	0.06	30.00	1.00	Complies	

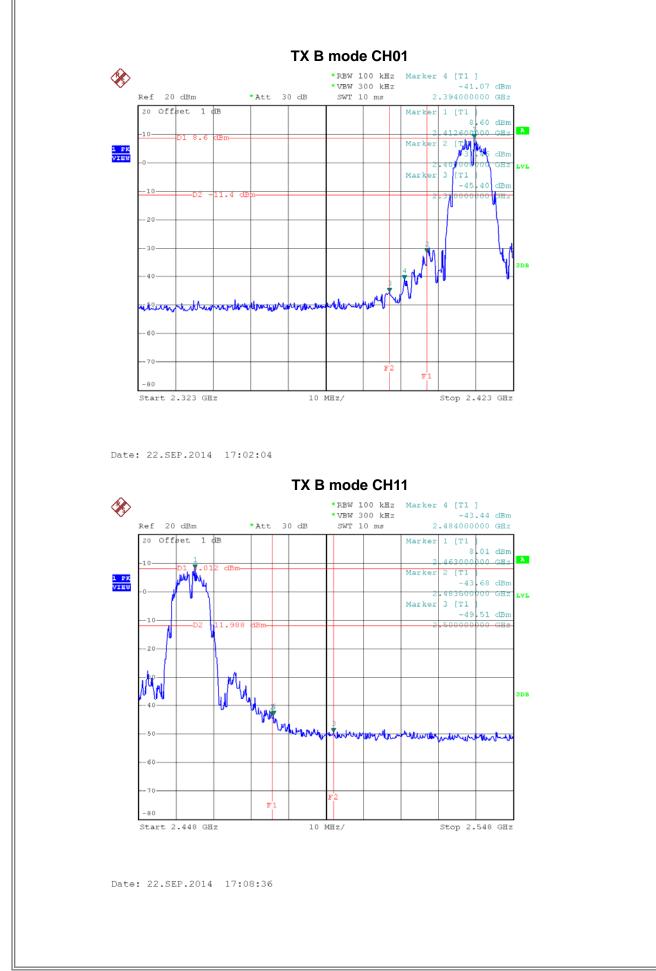
### Test Mode :TX N40 Mode\_CH03/06/09\_Total

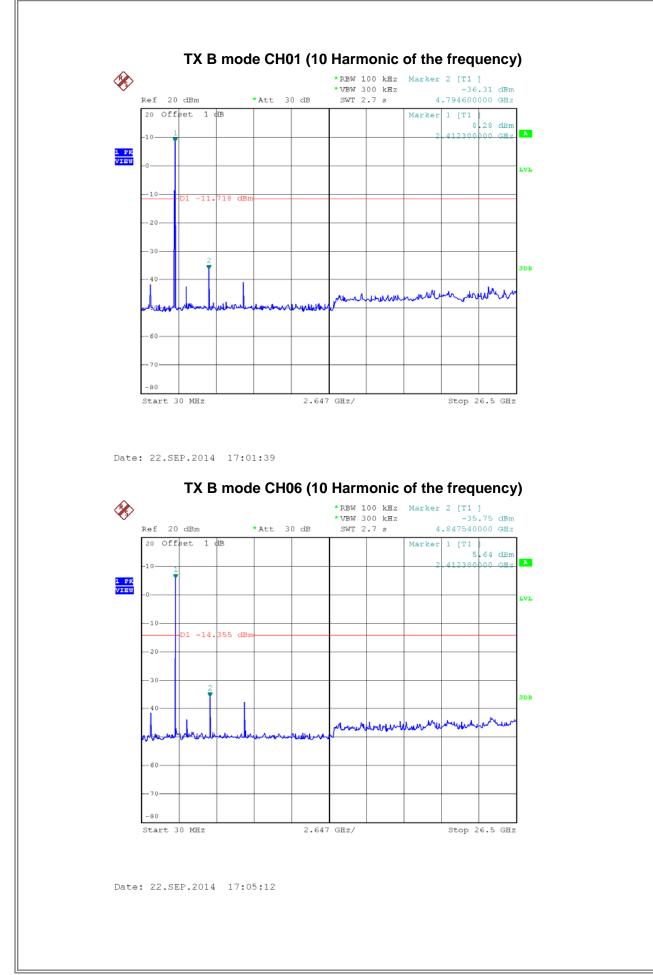
Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result	
2422	20.19	0.10	30.00	1.00	Complies	
2437	19.81	0.10	30.00	1.00	Complies	
2452	20.19	0.10	30.00	1.00	Complies	

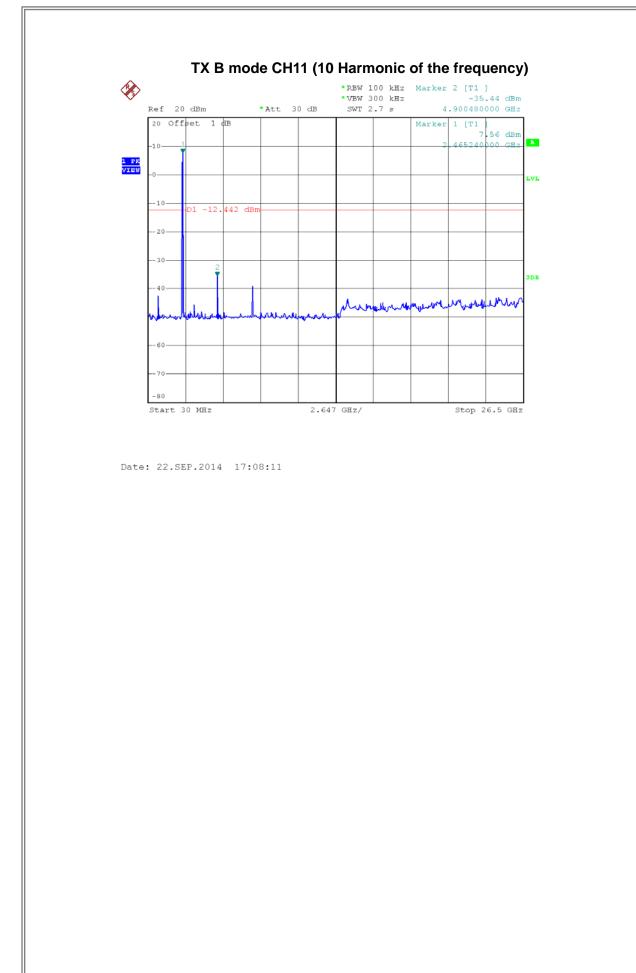
## ATTACHMENT G - ANTENNA CONDUCTED SPURIOUS EMISSION



Test Mode :	TX B Mode_ANT 1	

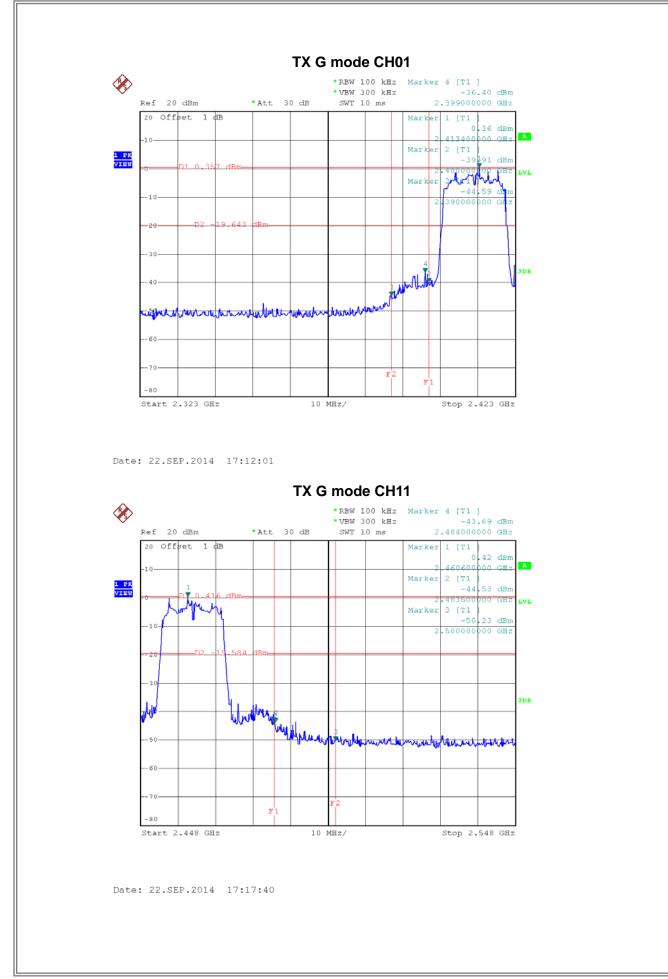




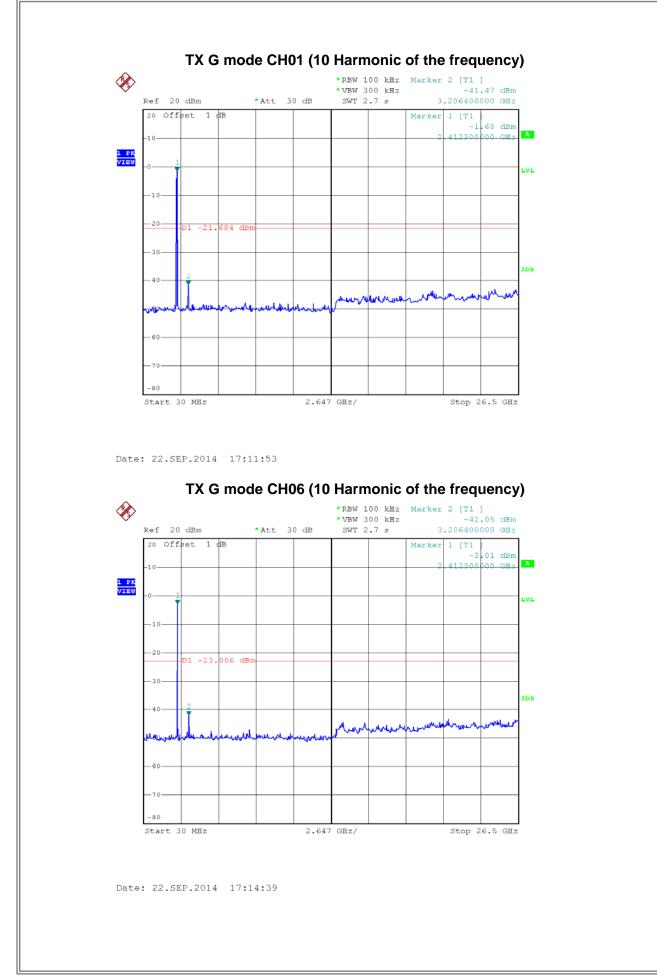


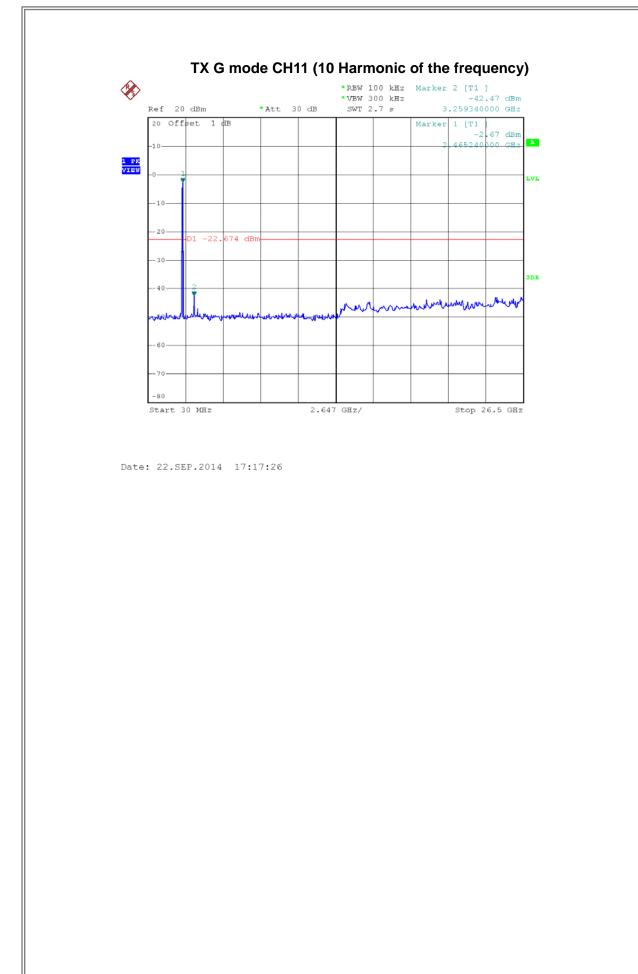


Test Mode : TX G Mode_ANT 1		
	Test Mode :	TX G Mode_ANT 1



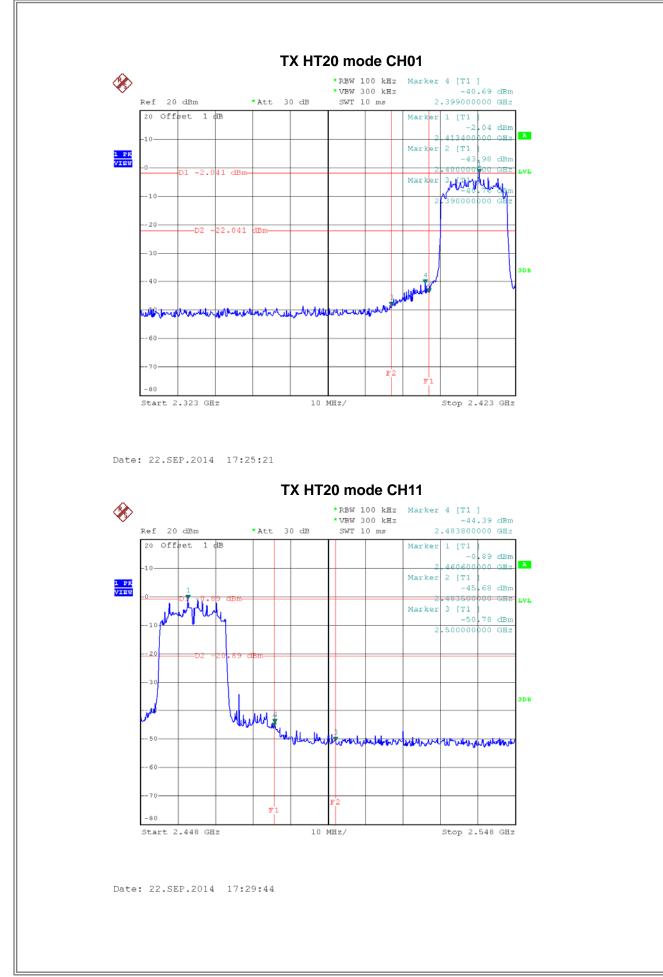
Report No.: BTL-FCCP-1-1409C131



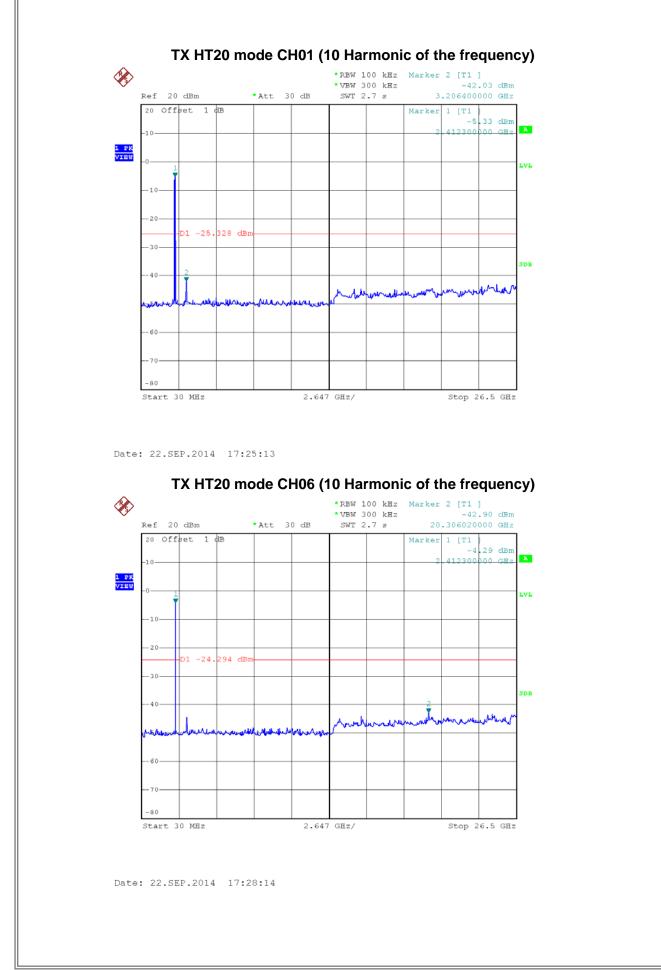


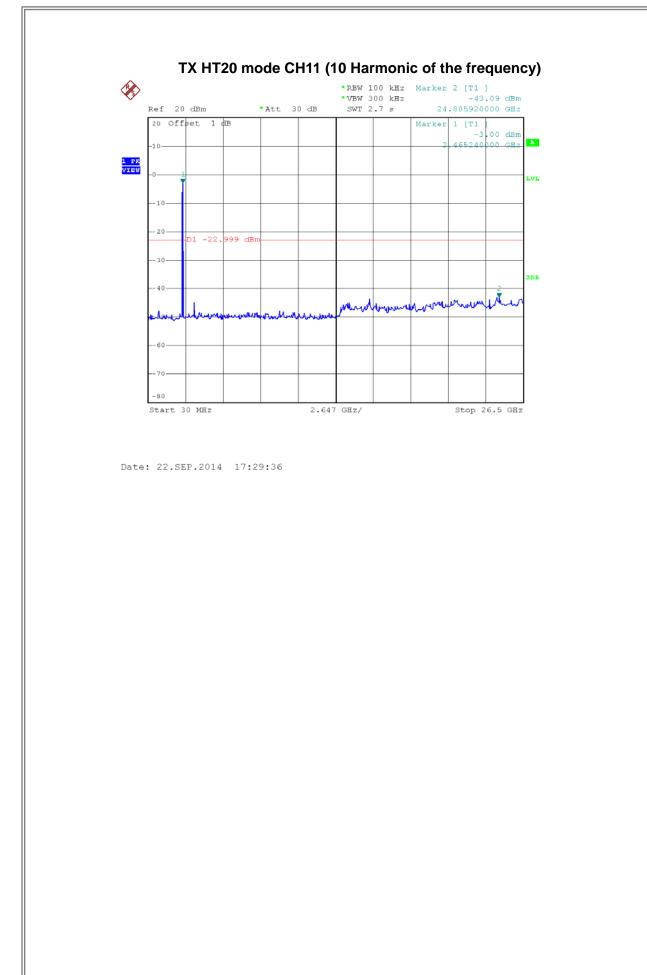


Test Mode :	TX N-20M Mode_ANT 1



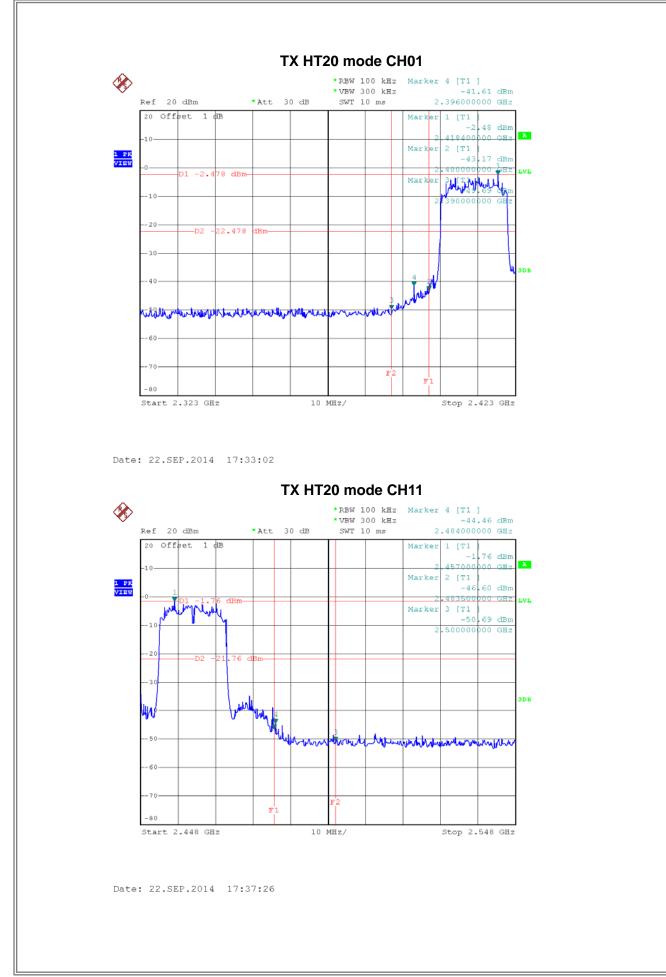
Report No.: BTL-FCCP-1-1409C131

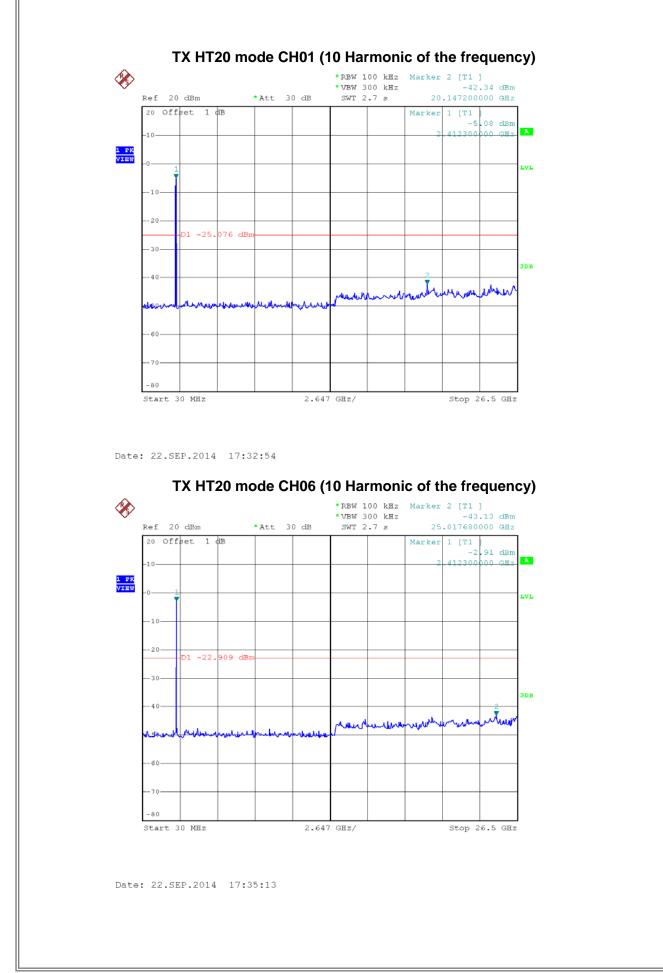


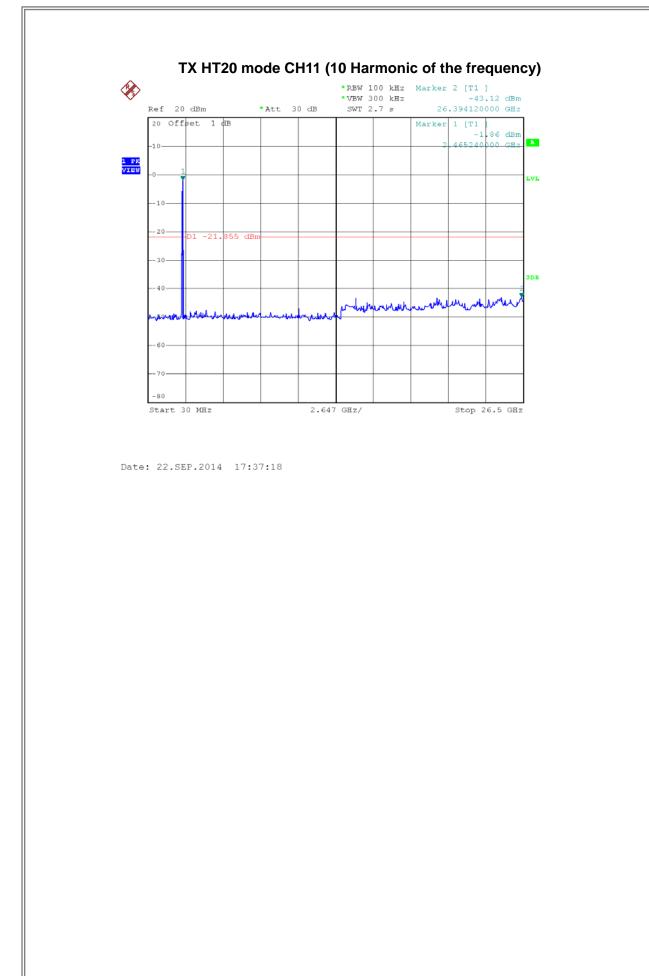




Test Mode :	TX N-20M Mode_ANT 2	
Doport No · DTI	FCCP-1-1409C131	Page 118 of 14

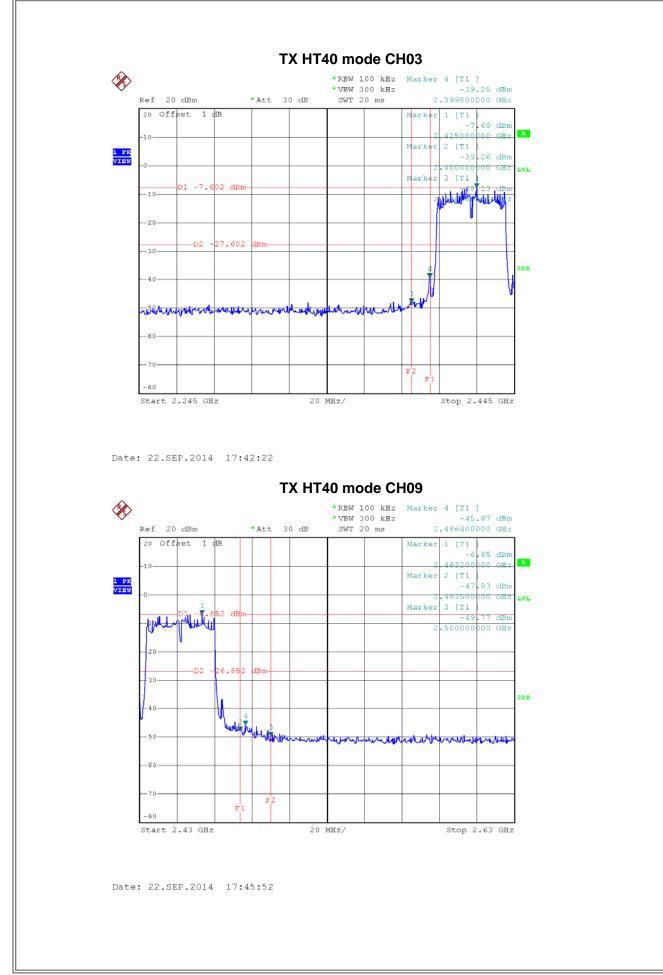


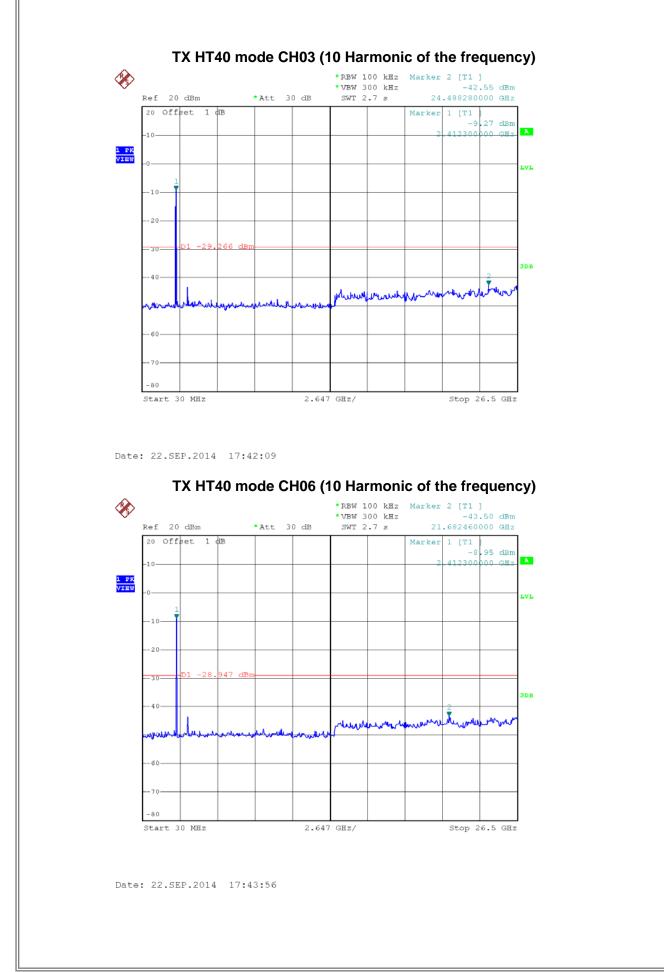


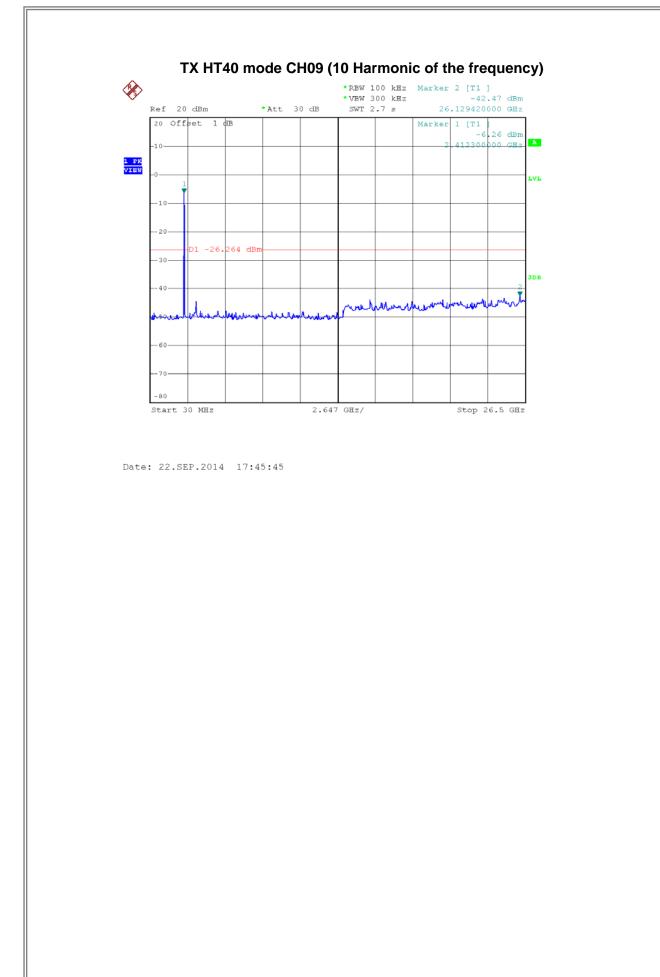




Test Mode :	TX N-40M Mode_ANT 1

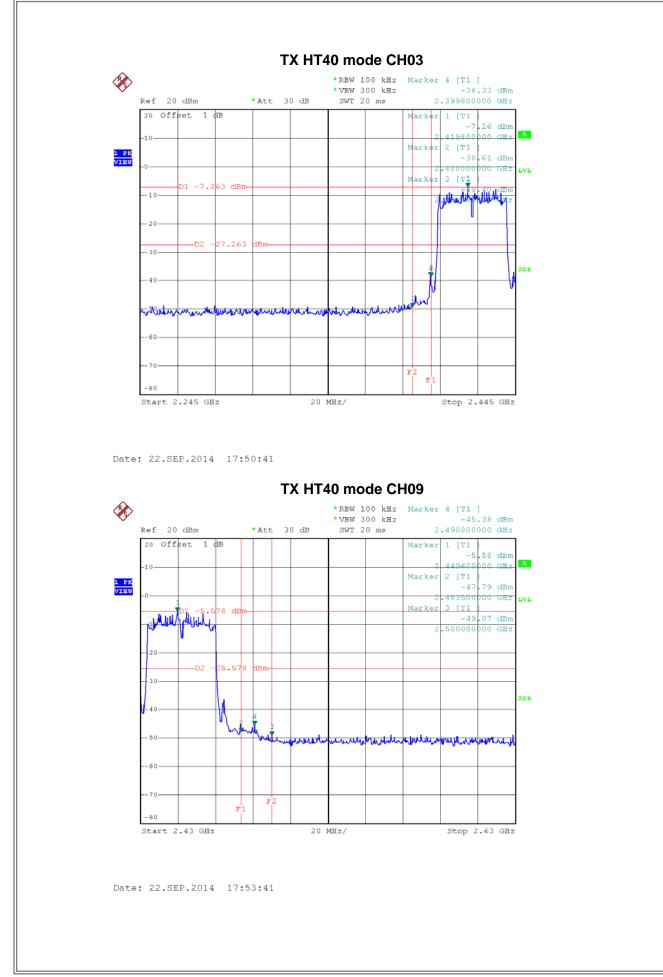


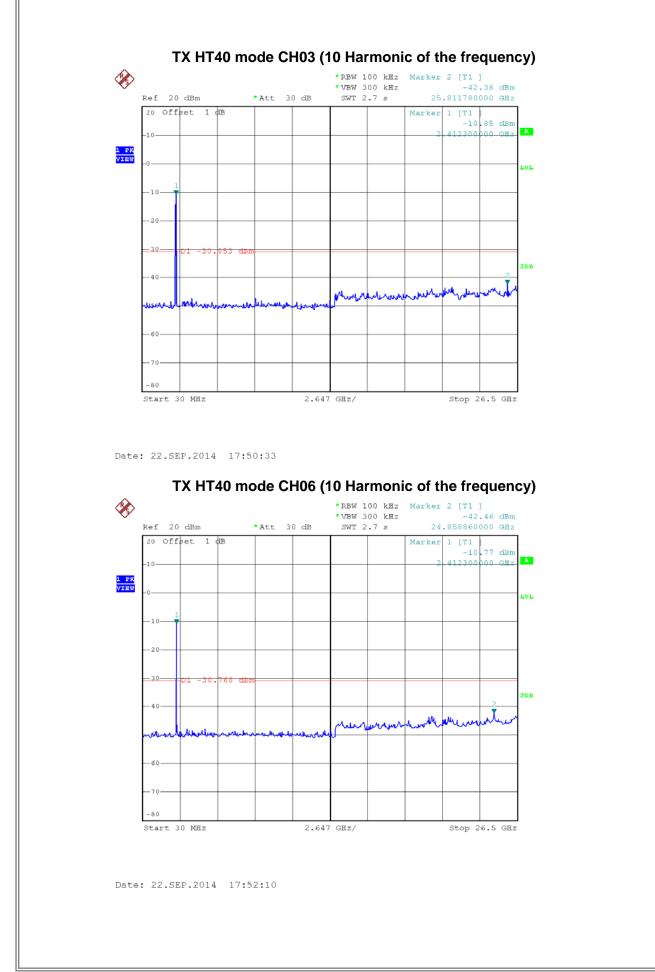


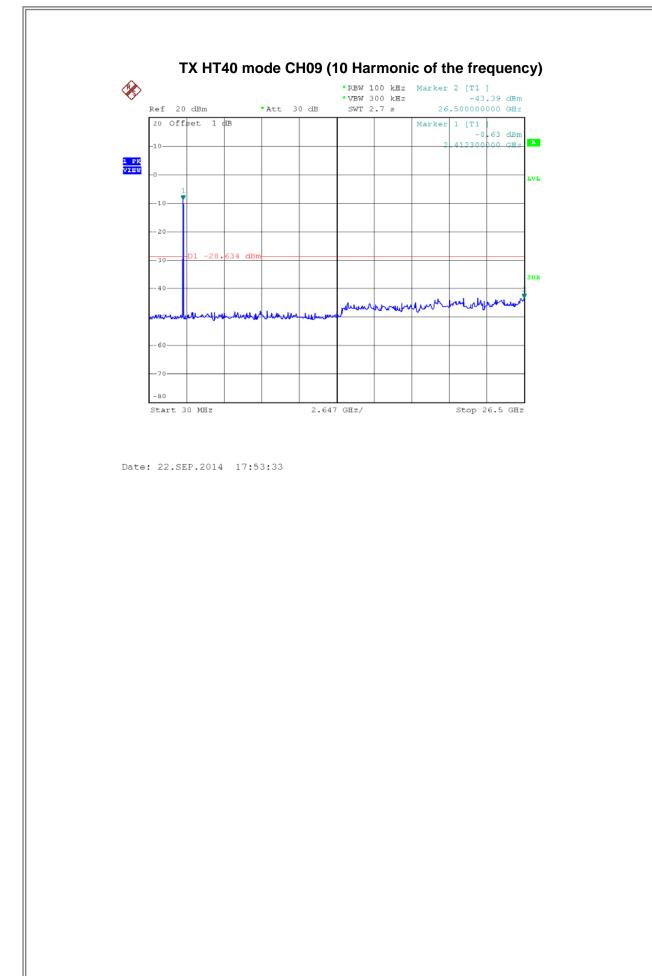




Test Mod	e : TX N-40M N	lode_ANT 2		





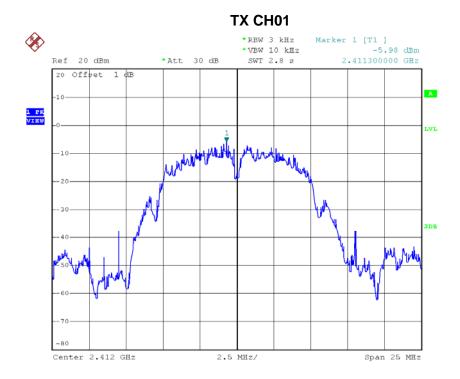


## **ATTACHMENT H - POWER SPECTRAL DENSITY**

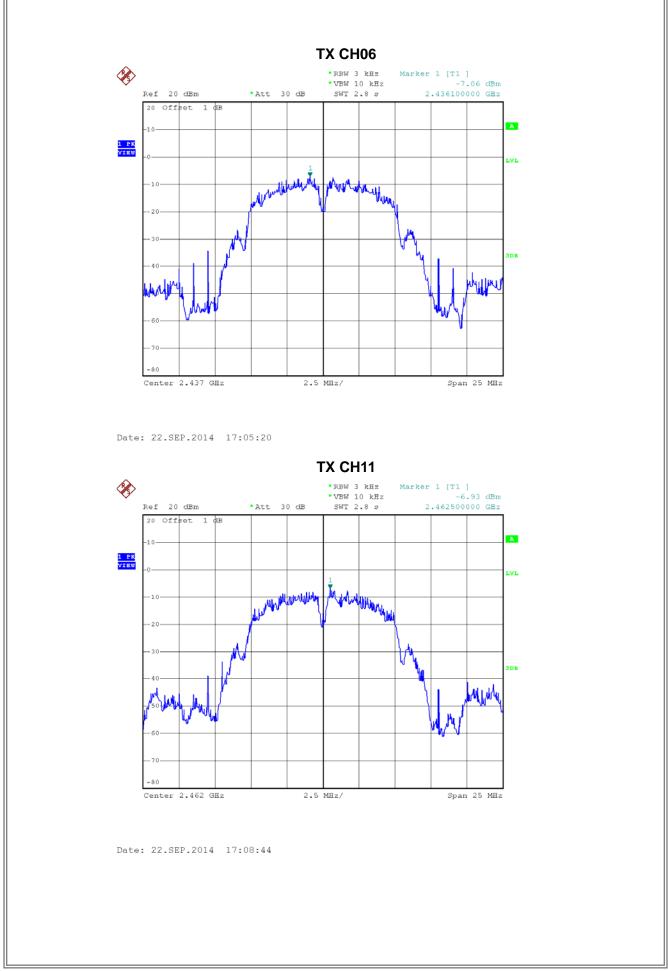


## Test Mode :TX B Mode\_CH01/06/11\_ANT 1

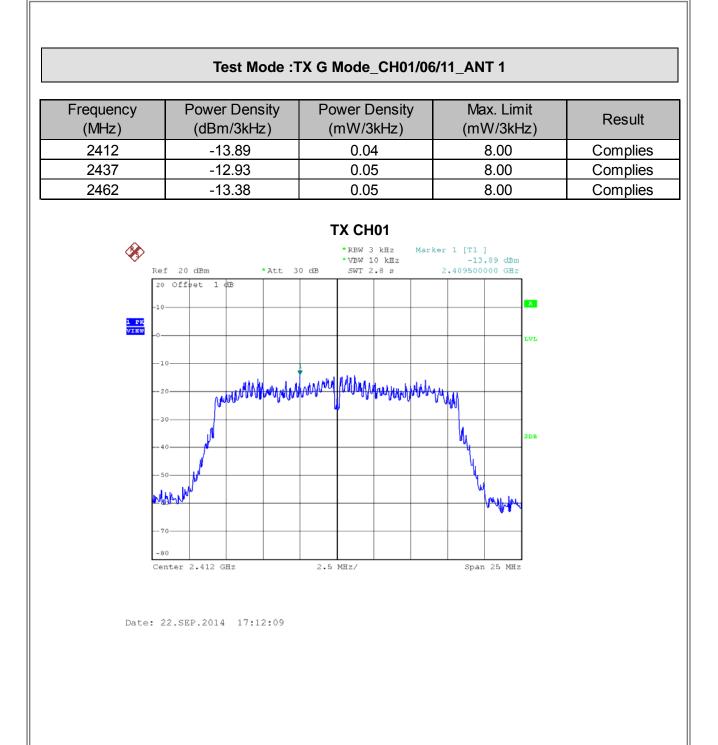
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (mW/3kHz)	Result
2412	-5.98	0.25	8.00	Complies
2437	-7.06	0.20	8.00	Complies
2462	-6.93	0.20	8.00	Complies

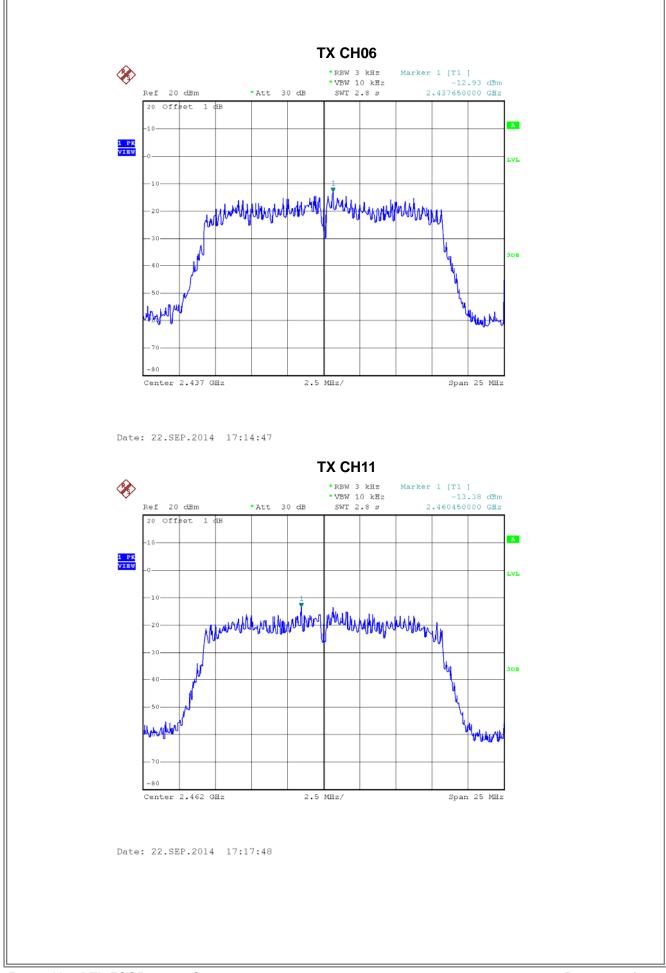


Date: 22.SEP.2014 17:02:12

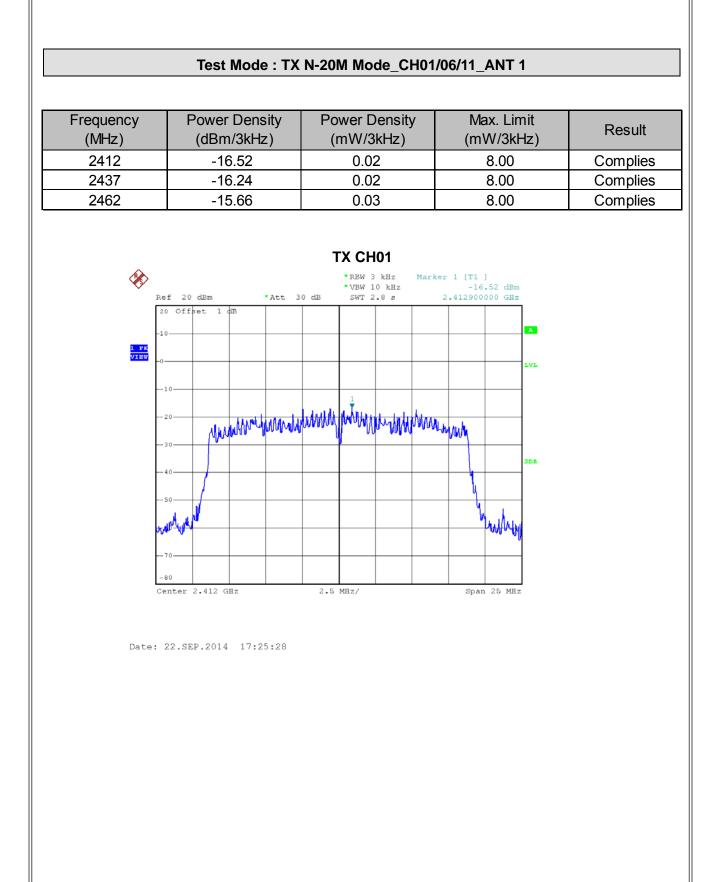


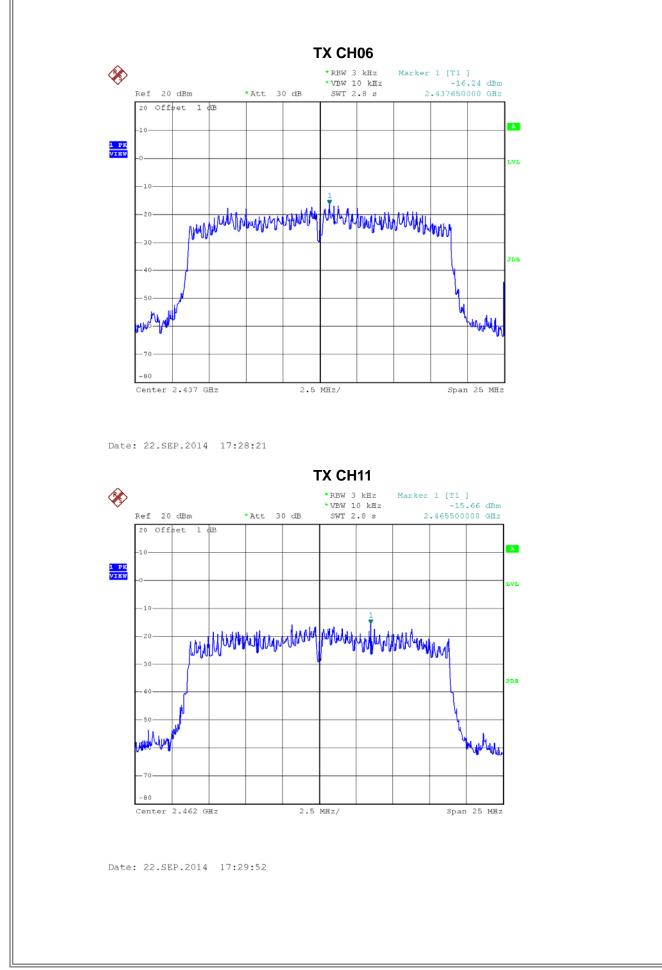




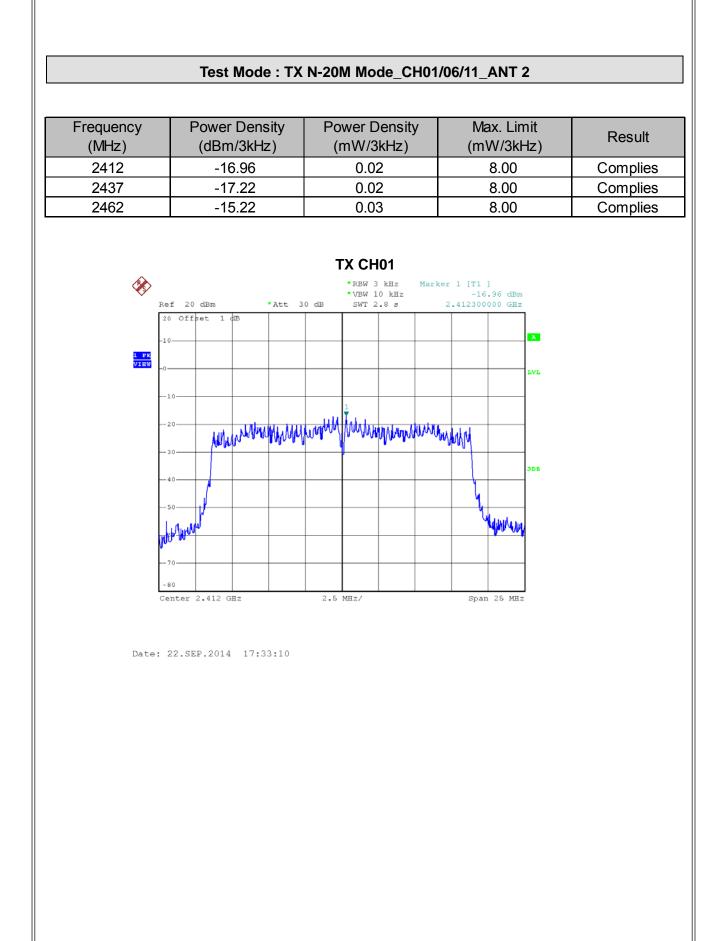


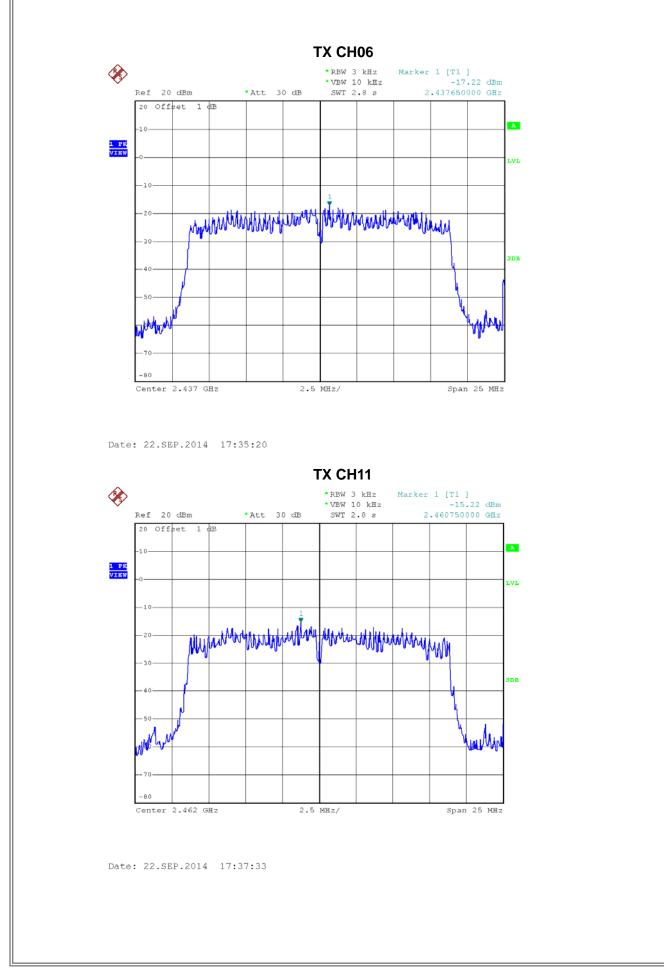










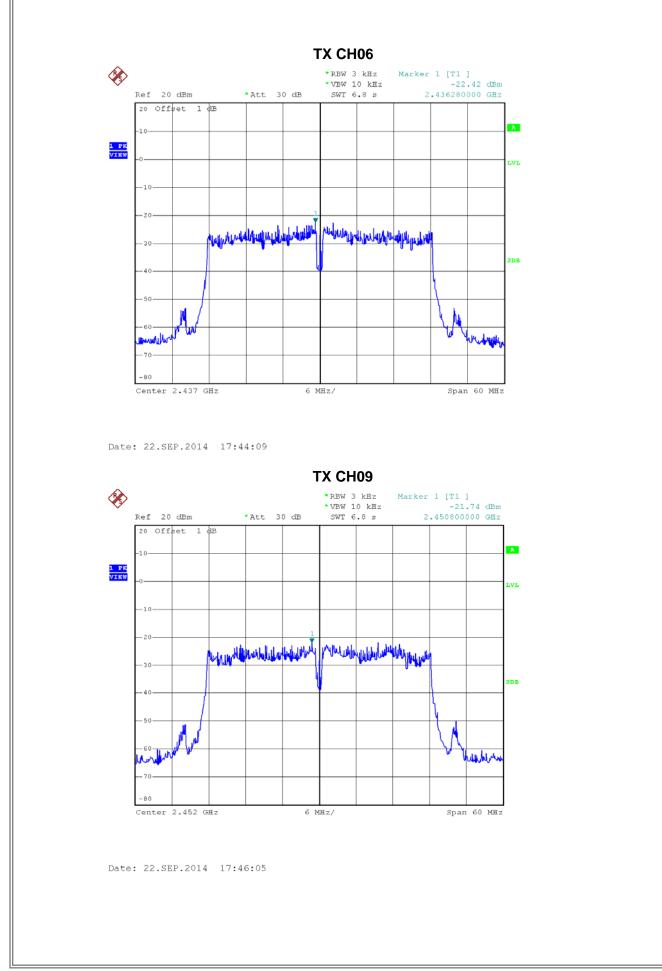


Test Mode : TX N-20M Mode	_CH01/06/11_Total
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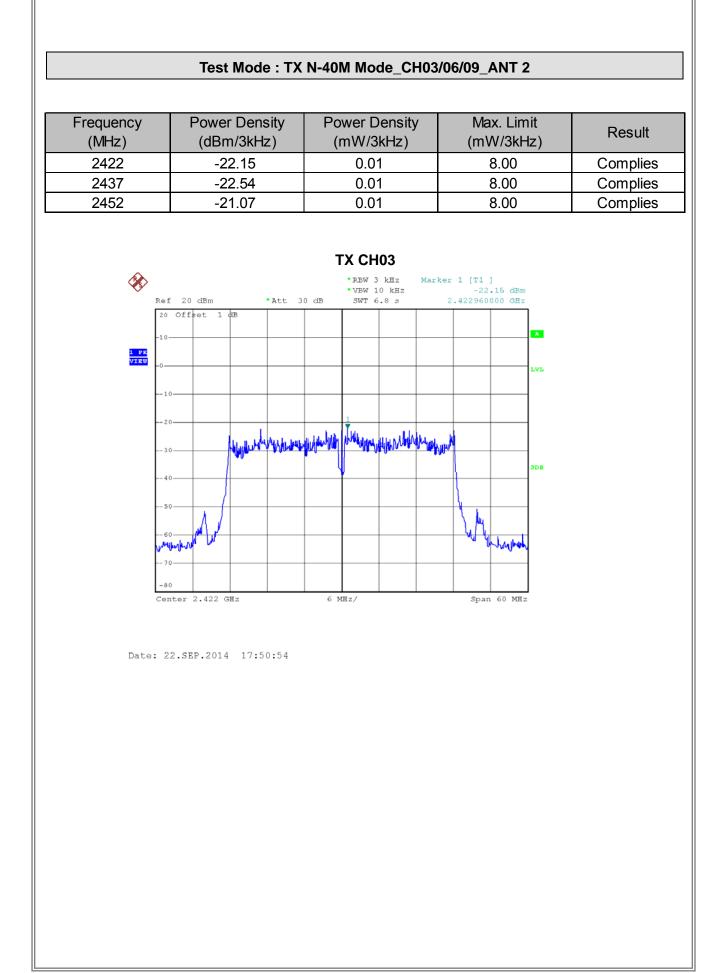
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (mW/3kHz)	Result
2412	-13.72	0.04	8.00	Complies
2437	-13.69	0.04	8.00	Complies
2462	-12.43	0.06	8.00	Complies

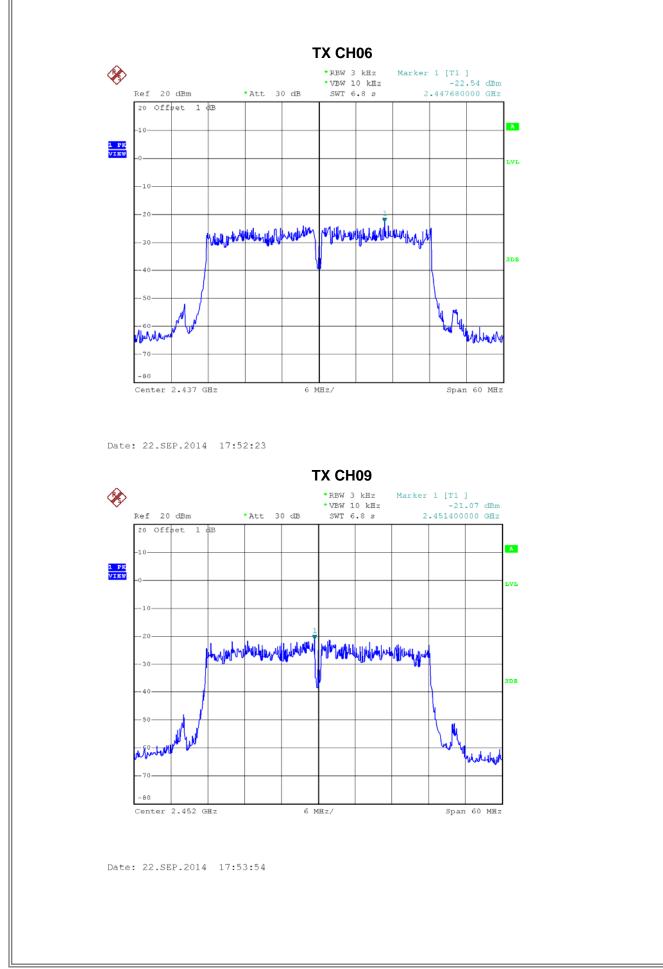


## Test Mode : TX N-40M Mode\_CH03/06/09\_ANT 1 Frequency **Power Density Power Density** Max. Limit Result (MHz) (dBm/3kHz) (mW/3kHz) (mW/3kHz) 2422 -22.38 0.01 Complies 8.00 Complies 2437 -22.42 0.01 8.00 2452 -21.74 Complies 0.01 8.00 **TX CH03** Ì \*RBW 3 kHz Marker 1 [T1 ] \*VBW 10 kHz SWT 6.8 s -22.38 dBm 2.420080000 GHz Ref 20 dBm Att 30 dB 20 Offset 1 dB А 1 PK VIEW - Leving alger relation of the program the stand we 3DB white 80 Center 2.422 GHz 6 MHz/ Span 60 MHz Date: 22.SEP.2014 17:42:35











## Test Mode : TX N-40M Mode\_CH03/06/09\_Total

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (mW/3kHz)	Result
2422	-19.25	0.01	8.00	Complies
2437	-19.47	0.01	8.00	Complies
2452	-18.38	0.01	8.00	Complies